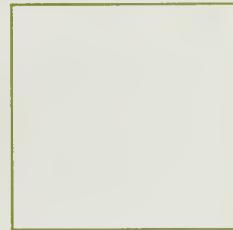


Appendix Feasibility Study

DRAFT



5/S



San Francisco Public Library

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REFERENCE BOOK

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Laguna Honda Hospital and
Rehabilitation Center

City of San Francisco
Department of Public Health

Anshen + Allen Architects / GORDON H. CHONG & Partners

August 1
2007



3 Appendix

NCB Development Corporation Data
Long Term Care Coordinating Council Memo
Services & Amenities Questionnaire
EIR Options
Cost Estimate Tabulations
HFS Review of Funding Options & License
Criteria
Engineer Narratives

Appendix

NCB Development Corporation

CURRENT TRENDS AND BEST PRACTICES IN ASSISTED LIVING

For Laguna Honda Hospital Replacement Program

Assisted Living Project

Sue Eisenberg, NCB Development Corporation

March 13, 2006

NCB Development Corporation

NCDBC is a national nonprofit organization based in Washington, D.C. We create access to capital and provide technical assistance in the following areas:

- Affordable Housing and Services
- Health Care Facilities
- Education/Charter Schools
- Affordable Cooperative Homeownership
- Asset Development for Low-Income Persons with Disabilities

With our partners, we find innovative solutions and empower underserved communities to progress and improve the lives of their residents.

Over the past 14 years, NCBDC has provided consulting services to 12 states assisting with implementation and/or refinement of their:

- Medicaid Home- and Community-Based Services programs
- Assisted living regulatory frameworks
- Housing finance policies

Our work has also facilitated an increase in the supply of affordable assisted living:

- 40 affordable assisted living residences in operation
- 59 affordable assisted living residences in development

Assisted Living

41 states and the District of Columbia use the term “assisted living.” In some states assisted living is a specific model with a consumer-centered service philosophy, private apartments and a broad array of services that support aging in place. In others, residential care licensing categories have been consolidated under a general set of “assisted living” rules. Assisted living may be a licensed setting in which services are delivered or a licensed agency that delivers services in a range of settings.

Characteristics of Assisted Living:

- Licensed by State
- Usually purpose-built facilities offering private apartment-type units
- Service philosophy that emphasizes autonomy, independence, choice and control
- Subject to staffing requirements
- Provide room, board and services (usually to meet both scheduled and unscheduled needs)
- Able to accommodate needs of frail elderly

41 states use Medicaid funds to cover services in residential care settings.

Oregon:

- Has separate licensing and regulations for residential care facilities and assisted living facilities. The major distinction is that ALFs have private apartments whereas RCFs have both private and shared rooms and private and shared baths. There are two levels of RCFs. Level I serves residents who only require assistance with ADLs. Level II additionally serves people who have an increase in medical acuity.
- Rules for ALFs and RCFs establish standards that promote the availability of appropriate services in a home-like environment that enhances the dignity, independence, privacy, choice and decision making ability of the resident.
- Nurse Delegation Act negotiated service plans, negotiated risk agreements.

Appendix

NCB Development Corporation

- Medicaid pays for 5 levels of service in ALFs and Level II RFFs.
- ALFs are expected to meet the 24 hour scheduled and unscheduled needs of residents. RCFs have staffing ratios depending on the number of residents and the time of day.

Washington:

- Medicaid covers services in 3 types of boarding homes: assisted living, adult residential care and enhanced adult residential care. Assisted living services and enhanced residential care services are a package of services including personal care, intermittent nursing services and medication administration services.
- Nurse Delegation Act does not include injections; negotiated service plans; negotiated risk agreements.
- Medicaid pays for 12 levels of care in 4 settings-AL, RCH, ERAC and AFH with regional variations.

Critical Variables

- Services
 - Meet scheduled and unscheduled needs
 - Limitations on services
 - Negotiated Risk Agreements
 - Medication management
 - Health-related services
- Staffing
 - 24 hour awake staff
 - Training
 - Staffing ratios
- Physical Environment
 - Privacy
 - Accessibility
 - Life-safety (ability to self-evacuate)

- Regulatory environment
 - Quality assurance and monitoring
 - Admission, retention and discharge requirements

California Assisted Living Waiver Pilot Project

The Assisted Living Waiver Pilot Project (ALWPP) is the Medi-Cal program that pays for Assisted Living, care coordination and other specified benefits provided to eligible seniors and persons with disabilities who reside in one of the Project's three target counties: Sacramento, San Joaquin and Los Angeles.

There are two implementation models for the Project:

- In the first, Assisted Living Services are provided to participants who reside in Residential Care Facilities for the Elderly. In this model, services are delivered by the RCFE staff.
- In the second model. Assisted Living Services are provided to participants who reside in publicly subsidized housing. In this model, services are delivered by Home Health Agency staff.

The ALWPP benefits package includes:

- Assisted Living Bundle Services or Assisted Care (depending on where the client is residing);
- Care Coordination;
- Interpretation and translation services;
- Consumer education;
- Access to a fund that pays for environmental accessibility adaptation; and
- Access to a fund that facilitates community transition from a nursing facility to the community.

Appendix

NCB Development Corporation

The eligibility criteria are:

- Age 21 or older;
- Enrolled in the Medi-Cal program;
- Have care needs equal to those of Medi-Cal funded residents in Nursing Facilities;
- Willing to live in an AL Waiver setting as an alternative to a nursing facility. Facilities approved to participate in the ALWPP must be located in one of the three pilot countries;
- Able to be served within the ALWPP cost limitations; and
- Able to reside safely in this setting.

The Assisted Living Bundle of services provided or coordinated by RCFE staff in the RCFE setting include:

- Develop a Service Plan for each resident detailing, at a minimum, the frequency and timing of assistance. Residents must be a part of the development process and must sign the Service Plan;
- Provide personal care and assistance with ADLs and IADLs sufficient to meet both the scheduled and unscheduled needs of the residents;
- Wash, dry and fold all laundry;
- Perform all necessary housekeeping tasks;
- Maintain the facility;
- Provide three meals per day plus snacks. Food must meet minimum daily nutritional requirements;
- Provide intermittent skilled nursing services as required by residents;
- In accordance with State law, provide assistance with the self administration of medications or, as necessary, administer medications;

- Provide or coordinate transportation;
- Provide daily social and recreational activities; and
- Provide a response system that enables waiver beneficiaries to summon assistance from personal care providers.

The California Department of Health Services is developing the ALWPP with the assistance of NCB Development Corporation. More information about the Project can be found at the ALWPP web site, www.californiaassistedliving.org.

Appendix

Long Term Care Coordination Council

LONG TERM CARE COORDINATING COUNCIL

Guiding the development of an integrated system of home, community-based, and institutional services for older adults and adults with disabilities

Housing and Services Workgroup

Fifteen Principles to Guide Development of the 140 units of Assisted Living

at Laguna Honda Hospital (LHH)

July 18, 2007

1. The Assisted Living building(s) will provide housing plus services.
2. The Assisted Living building(s), as currently planned, will be part of an on-site continuum of long term care on the LHH campus that include skilled nursing, transitional care beds, rehabilitation, adult day health, etc.
3. The Assisted Living building(s) will have studio, one and perhaps some 2 bedroom housing units. Each unit would have a kitchenette and accessible private bathroom.
4. Residents will have access to personal care services, and licensed services such as Home Health, Occupational and Physical Therapy and other services through the licensed Adult Day Health Center on the LHH site.
5. Residents will have access to range of meal options, including congregate meals and home delivered meals
6. Social worker/case management/care coordination staff will be available on-site to help arrange services and support to enable the person to live as independently as possible.
7. Activities will be planned and coordinated, with input and involvement of the residents.
8. Transportation will be improved to better connect the Assisted Living and LHH in general to the wider community.
9. The building will have front door desk clerk and other appropriate security.

10. Residents will be able to access primary care within the LHH complex, with an orientation to support for community living.
11. OT/PT will be arranged as requested.
12. Residents will have access to mental health services and support within the LHH Complex.
13. The service model for residents of the Assisted Living will emphasize options and personal choice.
14. Residents will be drawn primarily from LHH skilled nursing unit, the LHH waiting list, or be at imminent risk of institutionalization.
15. Residents will be able to "age in place" with services increased as needed, rather than be required to move out of their unit to receive additional support.

Appendix

Services and Amenities Questionnaire

ASSISTED LIVING AT LAGUNA HONDA: SERVICES AND AMENITIES

A. Basic Activities Assistance Provided to Residents

Yes No

Two hours of assistance each day with the activities of daily living such as:

1. Bathing	<input type="checkbox"/>	<input type="checkbox"/>
2. Grooming	<input type="checkbox"/>	<input type="checkbox"/>
3. Dressing	<input type="checkbox"/>	<input type="checkbox"/>
4. Eating	<input type="checkbox"/>	<input type="checkbox"/>
5. Toileting	<input type="checkbox"/>	<input type="checkbox"/>
6. Continence care	<input type="checkbox"/>	<input type="checkbox"/>
7. Transferring	<input type="checkbox"/>	<input type="checkbox"/>
8. Escort and walking assistance service	<input type="checkbox"/>	<input type="checkbox"/>
9. Telephone calls	<input type="checkbox"/>	<input type="checkbox"/>
10. Reminders and appointment management	<input type="checkbox"/>	<input type="checkbox"/>

B. Optional Services Available to Residents for an Extra Charge

Yes No

1. Assistance in excess of two hours per day	<input type="checkbox"/>	<input type="checkbox"/>
2. Medications management	<input type="checkbox"/>	<input type="checkbox"/>
3. Medication administration	<input type="checkbox"/>	<input type="checkbox"/>
4. Telemetric physiological monitoring	<input type="checkbox"/>	<input type="checkbox"/>
5. Blood glucose monitoring	<input type="checkbox"/>	<input type="checkbox"/>
6. Wander management	<input type="checkbox"/>	<input type="checkbox"/>
7. Personal laundry	<input type="checkbox"/>	<input type="checkbox"/>
8. Beauty / barber shop services	<input type="checkbox"/>	<input type="checkbox"/>
9. Manicures and pedicures	<input type="checkbox"/>	<input type="checkbox"/>
10. One-one-one fitness and mobility training	<input type="checkbox"/>	<input type="checkbox"/>
12. Physical therapy	<input type="checkbox"/>	<input type="checkbox"/>
13. Guest meals	<input type="checkbox"/>	<input type="checkbox"/>
15. Unscheduled transportation	<input type="checkbox"/>	<input type="checkbox"/>
16. Shopping assistance	<input type="checkbox"/>	<input type="checkbox"/>
17. Money management	<input type="checkbox"/>	<input type="checkbox"/>

Reviewed by: Date:

ASSISTED LIVING AT LAGUNA HONDA: SERVICES AND AMENITIES

C. Staff Availability

	Yes	No
1. On-duty care staff on premises at all times.....	<input type="checkbox"/>	<input type="checkbox"/>
2. On-duty licensed nursing staff available on-site days and evenings	<input type="checkbox"/>	<input type="checkbox"/>
3. On-call licensed nursing staff available at night.....	<input type="checkbox"/>	<input type="checkbox"/>

D. Services Not Available to Residents

Should a resident become dependent on any of the following services, that resident will be moved to a skilled nursing facility:

1. 24-hour licensed nursing care on a chronic basis	<input type="checkbox"/>	<input type="checkbox"/>
2. Incontinence management	<input type="checkbox"/>	<input type="checkbox"/>
3. Transfer assistance requiring assistance by more than one person	<input type="checkbox"/>	<input type="checkbox"/>
4. Pressure ulcer management.....	<input type="checkbox"/>	<input type="checkbox"/>
5. Observation or care required to prevent the resident from endangering the health, safety or welfare of others	<input type="checkbox"/>	<input type="checkbox"/>
6. Observation or care required to prevent the resident from endangering their own health, safety or welfare	<input type="checkbox"/>	<input type="checkbox"/>

E. Basic Apartment Amenities Provided to Residents

	Yes	No
1. Fully furnished unit.....	<input type="checkbox"/>	<input type="checkbox"/>
2. Carpeting.....	<input type="checkbox"/>	<input type="checkbox"/>
3. Window coverings	<input type="checkbox"/>	<input type="checkbox"/>
4. Bathroom with sink, toilet and walk-in shower (some units include a bath)	<input type="checkbox"/>	<input type="checkbox"/>
5. Fully equipped kitchen with refrigerator/freezer, cooktop, oven, dishwasher	<input type="checkbox"/>	<input type="checkbox"/>
6. Microwave oven.....	<input type="checkbox"/>	<input type="checkbox"/>
7. Washer and dryer.....	<input type="checkbox"/>	<input type="checkbox"/>
8. Electrical power	<input type="checkbox"/>	<input type="checkbox"/>
9. Hot and cold water.....	<input type="checkbox"/>	<input type="checkbox"/>
10. Heating.....	<input type="checkbox"/>	<input type="checkbox"/>
11. Intramural telephone service.....	<input type="checkbox"/>	<input type="checkbox"/>
12. Local telephone service.....	<input type="checkbox"/>	<input type="checkbox"/>
13. Basic cable television service	<input type="checkbox"/>	<input type="checkbox"/>
14. On-demand video service	<input type="checkbox"/>	<input type="checkbox"/>
15. Intranet service with messaging, announcements and reminders	<input type="checkbox"/>	<input type="checkbox"/>

Appendix

Services and Amenities Questionnaire

ASSISTED LIVING AT LAGUNA HONDA: SERVICES AND AMENITIES

16. Broadband internet access with e-mail service and Web page hosting	<input type="checkbox"/>	<input type="checkbox"/>
17. Emergency response system	<input type="checkbox"/>	<input type="checkbox"/>
18. Mobility cart parking and charging space.....	<input type="checkbox"/>	<input type="checkbox"/>
19. Automobile parking space	<input type="checkbox"/>	<input type="checkbox"/>
F. Optional Apartment Amenities Available to Residents for an Extra Charge	Yes	No
1. Ceiling-mounted motorized lifting device from bed to bathroom	<input type="checkbox"/>	<input type="checkbox"/>
G. Basic Services Provided to All Residents	Yes	No
1. Meals, three per day, every day, served in the dining room	<input type="checkbox"/>	<input type="checkbox"/>
2. Nutritious snacks available throughout the day in the café	<input type="checkbox"/>	<input type="checkbox"/>
3. Complimentary hot and cold beverages including an espresso bar in the café	<input type="checkbox"/>	<input type="checkbox"/>
4. Housekeeping, provided weekly, including cleaning of bathroom and kitchen, vacuuming, dusting, changing of bed linens, changing of towels	<input type="checkbox"/>	<input type="checkbox"/>
6. Twice monthly deep cleaning of carpeting.....	<input type="checkbox"/>	<input type="checkbox"/>
7. Laundry service for linens and towels	<input type="checkbox"/>	<input type="checkbox"/>
H. Basic Transportation Provided to All Residents	Yes	No
1. Weekly scheduled trip via minibus with lift to shopping, banks	<input type="checkbox"/>	<input type="checkbox"/>
2. Weekly scheduled trip via minibus with lift to church services	<input type="checkbox"/>	<input type="checkbox"/>
3. Weekly scheduled trip via minibus with lift to medical	<input type="checkbox"/>	<input type="checkbox"/>
I. Social, Recreational, Wellness, Educational and Spiritual Activities and Facilities Provided to Residents	Yes	No
1. Multiple social and cultural activities are offered throughout the week	<input type="checkbox"/>	<input type="checkbox"/>
2. Aerobics classes.....	<input type="checkbox"/>	<input type="checkbox"/>
3. Flexibility classes.....	<input type="checkbox"/>	<input type="checkbox"/>
4. Tai chi classes	<input type="checkbox"/>	<input type="checkbox"/>
5. Fitness classes	<input type="checkbox"/>	<input type="checkbox"/>
6. Resistance training and cardiovascular equipment are available for use in the wellness center	<input type="checkbox"/>	<input type="checkbox"/>
7. Therapy pool	<input type="checkbox"/>	<input type="checkbox"/>
8. Weekly wellness monitoring.....	<input type="checkbox"/>	<input type="checkbox"/>

ASSISTED LIVING AT LAGUNA HONDA: SERVICES AND AMENITIES

9. On-site dental clinic	<input type="checkbox"/>	<input type="checkbox"/>
10. Convenience store	<input type="checkbox"/>	<input type="checkbox"/>
11. Library with current magazines and newspapers.....	<input type="checkbox"/>	<input type="checkbox"/>
12. Life enrichment classes, lectures and films	<input type="checkbox"/>	<input type="checkbox"/>
13. Book and current event discussion groups.....	<input type="checkbox"/>	<input type="checkbox"/>
14. Volunteer opportunities	<input type="checkbox"/>	<input type="checkbox"/>
15. Concerts	<input type="checkbox"/>	<input type="checkbox"/>
17. Outings to area attractions	<input type="checkbox"/>	<input type="checkbox"/>
18. Walking groups.....	<input type="checkbox"/>	<input type="checkbox"/>
19. Dinner and theatre outings.....	<input type="checkbox"/>	<input type="checkbox"/>
20. Socials.....	<input type="checkbox"/>	<input type="checkbox"/>
21. Holiday parties	<input type="checkbox"/>	<input type="checkbox"/>
22. Multi-denominational chapel.....	<input type="checkbox"/>	<input type="checkbox"/>
23. Secure landscaped grounds with walking paths.....	<input type="checkbox"/>	<input type="checkbox"/>
24. Meditation garden	<input type="checkbox"/>	<input type="checkbox"/>
25. Garden allotments with raised beds (allotments are offered to residents as they become available)	<input type="checkbox"/>	<input type="checkbox"/>
26. Greenhouse	<input type="checkbox"/>	<input type="checkbox"/>
27. Billiards room	<input type="checkbox"/>	<input type="checkbox"/>
28. Club room with adjoining outdoor terrace and grilling facilities	<input type="checkbox"/>	<input type="checkbox"/>
29. Art and craft room.....	<input type="checkbox"/>	<input type="checkbox"/>

J. House Policies

	Yes	No
1. Smoking is not permitted in any of the common spaces.	<input type="checkbox"/>	<input type="checkbox"/>
2. Smoking is permitted within a resident's own unit.	<input type="checkbox"/>	<input type="checkbox"/>
3. Smoking is permitted on the grounds is allowed only in designated smoking shelters.	<input type="checkbox"/>	<input type="checkbox"/>
4. Smoking is not permitted in the building or on the grounds.	<input type="checkbox"/>	<input type="checkbox"/>
5. Consumption of alcoholic beverages is permitted at meals.	<input type="checkbox"/>	<input type="checkbox"/>
6. Consumption of alcoholic beverages is permitted in the café in the evening.	<input type="checkbox"/>	<input type="checkbox"/>
7. Consumption of alcoholic beverages is permitted in each resident's own unit	<input type="checkbox"/>	<input type="checkbox"/>
8. Pets weighing no more than 22 pounds are permitted. Owners are responsible for the care and behavior of their pets.	<input type="checkbox"/>	<input type="checkbox"/>

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL
ASSISTED LIVING STUDY

CONCEPT PHASE



Date : July 26, 2007
By : GB

CONTENTS

SECTION	PAGE
1 Introduction	1
2 Key Criteria	3
3 Construction Summary	5
4 Option A	8
5 Option B	24
6 Option C	38
7 Option D	56
8 Option E	76

INTRODUCTION

The following Construction Cost Models have been produced from program level information together with reports from engineering consultants and drawings prepared by Anshen and Allen Architects. Design and engineering changes occurring subsequent to the issue of these documents have not been incorporated in this estimate

The Cost Models are based upon primarily on the program level information augmented by work previously carried out in planning the Hospital Replacement Program. For Option C (OSHPD) the scope of work is based on the project already designed and known as the West Residence (this was to be a bed wing similar to the East Wing under construction) The detailed design for Option C was utilized to extrapolate the quantities assuming the design would not be updated. Option D would be a similar shell as C but would have a redesigned interior for the proposed program and be a Non OSHPD project. Option A (Renovation) was based on a previous similar scheme with updated information for structure and services. For the remaining Options parametric measurements or allowances were used in conjunction with references from similar projects recently estimated by tbd consultants option B includes the demolition of the existing building and extensive sitework to accommodate the new configuration and the site preparation that might be required on the current site. Options on the West site assume all the rough grading has been done and all utilities are available at the site boundary.

PROJECT OUTLINE

The projects have various amounts of units and bed counts based on renovation and new build options
The Summary identifies the various options and configurations
Demolition of existing structures has been included in Options A (partial demolition) and B (full demolition required)

BASIS FOR PRICING

This estimate reflects the fair construction value for the construction of this project and should not be construed as a prediction of low bid. Prices are based on probable local prevailing union wage construction costs at the time the estimate was prepared, however an escalation line item is included to project the current costs to the projected made point (see Summary) from the date of this report. Pricing assumes a procurement process with competitive bidding for every portion of the construction work, which is to mean a minimum of 4 bids including for all subcontractors and materials/equipment suppliers. If fewer bids are solicited or received, prices can be expected to be higher. Please note that this estimate assumes competitive bid by general contractors.

Subcontractor's markups have been included in each line item unit price. Markups cover the cost of field overhead home office overhead and subcontractor's profit. Subcontractor's markups typically range from 5% to 15% of the unit price depending on market conditions.

General Contractor's/Construction Manager's general conditions' cost is calculated on a percentage basis. General Contractor's/Construction Manager's overhead and fees is based on a percentage of the total direct costs plus general conditions, and covers the contractor's bond, insurance, site office overheads, building permit applications, and profit.

Unless identified otherwise, the cost of such items as shift premiums, and allowances for temporary occupancy permits, police details or street/sidewalk permits are excluded.

Appendix

Cost Estimate Tabulations

We have included a Design/Pricing Contingency percentage to cover cost increases that will occur during design elaboration or unforeseen design issues. As the design develops, the design contingency is reduced, and is eliminated at the final Construction Document estimate. We have been advised that the client is carrying a separate allowance to cover same.

We have excluded a Market Contingency percentage to cover cost increases that may occur due to the project being bid at a time when the local construction market is stretched and bids could be unusually high. It is advisable for the client to carry an allowance to cover this volatility in the market.

A Construction Contingency is excluded from this estimate. However, in finalizing the project budget, it is recommended that the Owner should add a construction contingency to the Total Estimated Construction Cost in anticipation of change orders likely to occur during construction.

This cost estimate is based on standard industry practice, professional experience and knowledge of the local construction market costs. tbd consultants have no control over the material and labor costs, contractors methods of establishing prices or the market and bidding conditions at the time of bid. Therefore tbd consultants do not guarantee that the bids received will not vary from this cost estimate.

ITEMS NOT CONSIDERED IN THIS ESTIMATE

Items not included in this estimate are:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- Items identified in the design as Not In Contract (NIC)
- Owner supplied and/or installed items (e.g.. draperies, furniture and equipment)
- Tel/data, security and AV networks, equipment or software (unless identified otherwise)
- Rock excavation; special foundations (unless indicated by design engineers)
- Hazardous materials investigations and abatement (other than demolition allowance)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction or occupancy phasing or off hours' work, (except as noted in this estimate)
- Owners Construction Contingency for scope changes
- 3rd party MEP commissioning

ITEMS THAT MAY AFFECT THIS ESTIMATE

Such items include, but are not limited to the following:

- Modifications to the scope of work subsequent to the preparation of this estimate
- Unforeseen subsurface conditions
- Special requirements for site access, off-hour work or phasing activities
- Restrictive technical specifications, excessive contract or non-competitive bid conditions
- Sole source specifications for materials or products
- Bid approvals delayed beyond the anticipated project schedule

KEY CRITERIA



Appendix

Cost Estimate Tabulations

AREA TABULATION

<u>Options</u>		Units	Residents	Area GSF	SF/Bed	SF/Unit
A	Renovation	136	148	166,649	1,126	1,225
B	New	246	251	232,832	928	946
C	New-OSHPD	169	234	202,076	864	1,196
D	New	254	280	203,385	726	801
E	New	276	282	244,332	866	885

CONSTRUCTION COST SUMMARY



Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL
ASSISTED LIVING STUDY



Date : July 26,2007
By : GB

TBD Consultants

Summary of Construction Cost

OPTIONS

Item	Option A	Option B	Option C	Option D	Option E
Area SF	166649	232,832	202,076	203,385	244,332
Residents	148	251	234	280	282
Area per Bed	1126	928	864	726	866
OSHPD Status	Non-OSHPD	Non-OSHPD	OSHPD	Non-OSHPD	Non-OSHPD
Total Cost -07 Dollars	\$82,634,665	\$139,068,325	\$126,293,394	\$103,114,173	\$116,932,404
Escalation to mid point	40.20%	36.00%	36.00%	36.00%	36.00%
Total Escalated Cost	\$115,936,435	\$189,132,922	\$171,759,016	\$140,235,275	\$159,028,069
Cost/SF	696	812	850	690	651
Cost/Resident	\$783,354	\$753,518	\$734,013	\$500,840	\$563,929
Mid point of construction	Dec-11	Jul-11	Jul-11	Jul-11	Jul-11
Escalation Factor	1.403	1.36	1.36	1.36	1.36

LAGUNA HONDA HOSPITAL
ASSISTED LIVING STUDY

TBD Consultants



Date : July 26, 2007

By : GB

Summary of Project Cost

OPTIONS

Item		Option A	Option B	Option C	Option D	Option E
Area SF		166,649	237,568	202,076	202,076	229,217
Total Escalated Cost		\$115,936,435	\$189,132,922	\$171,759,016	\$140,235,275	\$159,028,069
Soft Costs						
CONSULTING FEES						
A/E Fees(C=30% of 11% 11.00%		\$12,753,008	\$20,804,621	\$5,668,048	\$15,425,880	\$17,493,088
CM/PM 3.00%		\$3,478,093	\$5,673,988	\$5,152,770	\$4,207,058	\$4,770,842
Other specialists 2.00%		\$2,318,729	\$3,782,658	\$3,435,180	\$2,804,706	\$3,180,561
ADMINISTRATION						
OSHPD 1.70%		\$1,970,919	\$3,215,260	\$0	\$2,384,000	\$2,703,477
Permits and testing 1.00%		\$1,159,364	\$1,891,329	\$1,717,590	\$1,402,353	\$1,590,281
IOR 0.50%		\$579,682	\$945,665	\$858,795	\$701,176	\$795,140
Insurance 0.50%		\$579,682	\$945,665	\$858,795	\$701,176	\$795,140
Owner Project Admin excl						
THIRD PARTY COM 0.50%		\$579,682	\$945,665	\$858,795	\$701,176	\$795,140
EIR/MITIGATION EXCL						
EQUIPMENT						
FF&E 12		\$1,999,788	\$2,850,816	\$2,424,912	\$2,424,912	\$2,750,604
Food Service EXCL						
Medical Equipment 2 (C=5)		\$333,298	\$475,136	\$1,010,380	\$404,152	\$458,434
IT 10 (C= 15)		\$1,666,490	\$2,375,680	\$3,031,140	\$2,020,760	\$2,292,170
TOTAL SOFT COST		\$27,418,735	\$43,906,483	\$25,016,405	\$33,177,349	\$37,624,877
TOTAL HARD AND SOFT		\$143,355,170	\$233,039,405	\$196,775,421	\$173,412,624	\$196,652,946
OWNER PROJ CONT 5.00%		\$7,167,759	\$11,651,970	\$9,838,771	\$8,670,631	\$9,832,647
TOTAL PROJECT COST		\$150,522,929	\$244,691,375	\$206,614,192	\$182,083,255	\$206,485,593

Appendix

Cost Estimate Tabulations

OPTION A



LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION A		Estimate Stage: Floor Area: Prepared by:	Concept Phase 166,819 SF IS
		Totals	
		Costs/SF	
UNIFORMAT SUMMARY			
A	SUBSTRUCTURE		
A10	FOUNDATIONS	\$206,288	\$1.24
A20	BASEMENT CONSTRUCTION		
B	SHELL		
B10	SUPERSTRUCTURE	\$6,770,084	\$40.58
B20	EXTERIOR CLOSURE	\$6,814,180	\$40.85
B30	ROOFING	\$369,144	\$2.21
C	INTERIORS		
C10	INTERIOR CONSTRUCTION	\$7,442,305	\$44.61
C30	INTERIOR FINISHES	\$5,975,768	\$35.82
D	SERVICES		
D10	CONVEYING SYSTEMS	\$1,000,000	\$5.99
D15	MECHANICAL	\$11,845,384	\$71.01
D50	ELECTRICAL	\$7,495,177	\$44.93
E	EQUIPMENT & FURNISHING		
E10	EQUIPMENT		
E20	FURNISHINGS		
F	SPECIAL CONSTRUCTION/DEMOLITION		
F10	SPECIAL CONSTRUCTION		
F20	SELECTIVE BUILDING DEMOLITION	\$5,955,485	\$35.70
BUILDING COST		\$53,873,815	\$322.95
G	BUILDING SITWORK		
G10	SITE PREPARATION	\$30,000	\$0.18
G20	SITE IMPROVEMENT	\$2,356,169	\$14.12
G30	SITE/MECHANICAL UTILITIES		
G40	SITE ELECTRICAL UTILITIES		
G50	OTHER SITE CONSTRUCTION		
TOTAL DIRECT COSTS		\$56,259,984	\$337.25
GENERAL CONDITIONS, OH & P BOND DESIGN CONTINGENCY CONSTRUCTION MANAGER ESCALATION to start of construction ESCALATION mid point construction. Jan 2013 CONSTRUCTION CONTINGENCY DESIGN FEES PERMITS, LICENSES, FEES		20% 2% 20%	\$67.45 \$8.09 \$82.56
ESTIMATE TOTAL			\$495.36

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A		Estimate: Prepared	Concept Phase 166819 SF IS		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
	DETAILED SUMMARY				
A10	FOUNDATIONS				
A1010	FOUNDATIONS	166,819	GFA	\$0.76	\$126,560
A1030	SLAB ON GRADE	166,819	GFA	\$0.48	\$79,728
	FOUNDATIONS				\$206,288
B10	SUPERSTRUCTURE				
B1010	FLOOR CONSTRUCTION	166,819	GFA	\$28.92	\$4,823,966
B1020	ROOF CONSTRUCTION	166,819	GFA	\$3.43	\$572,238
B1030	STAIR CONSTRUCTION	166,819	GFA	\$8.24	\$1,373,880
	SUPERSTRUCTURE				\$6,770,084
B20	EXTERIOR CLOSURE				
B2010	EXTERIOR WALLS	166,819	GFA	\$39.14	\$6,529,180
B2020	EXTERIOR WINDOWS	166,819	GFA	\$1.58	\$262,800
B2030	EXTERIOR DOORS	166,819	GFA	\$0.13	\$22,200
	EXTERIOR CLOSURE				\$6,814,180
B30	ROOFING				
B3010	ROOF COVERINGS	166,819	GFA	\$1.82	\$303,144
B3020	ROOF OPENINGS	166,819	GFA	\$0.40	\$66,000
	ROOFING				\$369,144
C10	INTERIOR CONSTRUCTION				
C1010	PARTITIONS	166,819	GFA	\$18.13	\$3,025,095
C1020	INTERIOR DOORS	166,819	GFA	\$5.56	\$927,400
C1030	SPECIALTIES	166,819	GFA	\$20.92	\$3,489,810
	INTERIOR CONSTRUCTION				\$7,442,305
C30	INTERIOR FINISHES				
C3010	WALL FINISHES	166,819	GFA	\$18.25	\$3,043,857
C3020	FLOOR FINISHES	166,819	GFA	\$9.51	\$1,586,595
C3030	CEILING FINISHES	166,819	GFA	\$8.06	\$1,345,316
	INTERIOR FINISHES				\$5,975,768

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A		Estimate: Floor Area: Prepared	Concept Phase 166819 SF IS		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
D10	CONVEYING SYSTEMS				
D1010	OTHER CONVEYING SYSTEMS	166,819	GFA	\$5.99	\$1,000,000
	CONVEYING SYSTEMS				\$1,000,000
D15	MECHANICAL				
D1520	PLUMBING	166,819	GFA	\$25.01	\$4,171,710
D1530	HVAC	166,819	GFA	\$39.00	\$6,505,941
D1540	FIRE PROTECTION	166,819	GFA	\$7.00	\$1,167,733
	MECHANICAL				\$11,845,384
D50	ELECTRICAL				
D5010	ELECTRICAL DISTRIBUTION	166,819	GFA	\$13.02	\$2,171,983
D5020	LIGHTING & BRANCH WIRING	166,819	GFA	\$12.80	\$2,135,283
D5040	SPECIAL ELECTRICAL SYSTEMS	166,819	GFA	\$19.11	\$3,187,911
	ELECTRICAL				\$7,495,177
F20	SELECTIVE BUILDING DEMOLITION				
F2010	BUILDING DEMOLITION	166,819	GFA	\$30.28	\$5,051,485
F2020	HAZARDOUS COMPONENTS ABATEMENT	166,819	GFA	\$5.42	\$904,000
	SELECTIVE BUILDING DEMOLITION				\$5,955,485
G	BUILDING SITE WORK				
G10	SITE PREPARATION	166,819	GFA	\$0.18	\$30,000
G20	SITE IMPROVEMENT	166,819	GFA	\$14.12	\$2,356,169
	BUILDING SITE WORK				\$2,386,169
	TOTAL DIRECT COSTS	166,819	GFA	\$337.25	\$56,259,984

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A		Estimate: Floor Area: Prepared	Concept Phase 166819 SF IS		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
	GENERAL CONDITIONS, OVERHEAD & PROFIT BOND	20.00% 2.00%			\$11,251,997 \$1,350,240
	Sub-Total	166,819	GFA	\$412.80	\$68,862,221
	DESIGN CONTINGENCY	20.00%			\$13,772,444
	Sub-Total		GFA	\$495.36	\$82,634,665
	ESTIMATE TOTAL				\$82,634,665

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
A1010		FOUNDATIONS				
		Foundations for (N) corridor Foundations for (N) exit staircase Connect (N) to (E)	2,052 1,500 1	SF SF LS	\$30.00 \$30.00 \$20,000.00	\$61,560 \$45,000 \$20,000
FOUNDATIONS						\$126,560
A1031		SLAB ON GRADE				
		SOG for (N) corridor SOG for (N) exit staircase Connect (N) to (E)	2,052 1,500 1	SF SF LS	\$14.00 \$14.00 \$30,000.00	\$28,728 \$21,000 \$30,000
SLAB ON GRADE						\$79,728
B1010		FLOOR CONSTRUCTION				
		Structural steel for (N) corridor construction Steel deck for (N) corridor construction Conc topping slab for (N) corridor Fire proof structural steel Connect (N) to (E) Infill floor construction @ south staircase	138 7182 7182 138 1 2	TON SF SF TON LS EA	\$4,000.00 \$5.00 \$8.00 \$400.00 \$75,000.00 \$60,000.00	\$552,000 \$35,910 \$57,456 \$55,200 \$75,000 \$120,000
		Structural steel for (N) staircase construction Steel deck for (N) staircase construction landings Conc topping slab for (N) staircase landings Fire proof structural steel Connect (N) staircase to (E) building	99 5600 5600 99 5	TON SF SF TON EA	\$4,000.00 \$5.00 \$8.00 \$400.00 \$20,000.00	\$396,000 \$28,000 \$44,800 \$39,600 \$100,000
		Seismic strengthen floor slab @ connection towers to bldgs. Note 3	14	LOC	\$25,000.00	\$350,000
		Seismic strengthen columns @ connector bldg	11	EA	\$90,000.00	\$990,000
		(N) single story child care structure	6000	SF	\$330.00	\$1,980,000
		FLOOR CONSTRUCTION				\$0
						\$0
						\$0
						\$0
						\$0
						\$0
						\$0
						\$0

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B1020		ROOF CONSTRUCTION				
		Aluminum faced insulation board to underside of slab, new & existing roofs	61493	SF	\$6.00	\$368,958
		Roof framing for (N) corridor	2052	SF	\$15.00	\$30,780
		Roof framing for (N) staircases	1500	SF	\$15.00	\$22,500
		(N) canopy @ 2nd floor	1	EA	\$150,000.00	\$150,000
ROOF CONSTRUCTION						\$572,238
B1030		STAIR CONSTRUCTION				
		Replace (e) stair handrail w/ ADA compliant handrail	360	LF	\$225.00	\$81,000
		Provide contrast nosings for (e) stairs, 6' wide	228	EA	\$210.00	\$47,880
		Stair flights @ (N) staircases	35	EA	\$12,000.00	\$420,000
		(N) Staircase finishes, handrails	5	EA	\$90,000.00	\$450,000
		Connect (N) staircase structure to (E) building	3	EA	\$125,000.00	\$375,000
STAIR CONSTRUCTION						\$1,373,880

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A			Estimate: Concept Phase Floor Area: 166,819 Prepared IS			
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B2010	EXTERIOR WALLS					
		Frame for stucco wall	12.896	SF	\$18.00	\$232 128
		Cement plaster finish @ exterior side of walls	12.896	SF	\$30.00	\$386 880
		Wall finish @ interior side walls	12.896	SF	\$7.00	\$90 272
		Resurface existing wall w/ cement plaster	11.973	SF	\$25.00	\$299 325
		Miscellaneous iron (allowance)	166819	gsf	\$1.25	\$208 524
		Expansion joint assembly for 2" gap	572	LF	\$90.00	\$51,480
		Infill wall opening (146 locations)	2.930	SF	\$150.00	\$439 500
		Miscellaneous infill opening	1	LS	\$10 000.00	\$10 000
		Reinforced gunite layer on east-west shear wall	6.253	SF	\$35.00	\$212 855
		Furr existing exterior wall	89.336	SF	\$8.00	\$714 888
		Wall insulation	102.232	SF	\$1.30	\$132 902
		Corian window stool, average 4' long	626	EA	\$450.00	\$281 700
		Clean and repair (e) cement plaster finish	77.363	SF	\$1.50	\$115 045
		Paint new door and frame	314	LV	\$200.00	\$62 800
		Paint (e) window inside and outside	596	EA	\$450.00	\$268 200
		Paint new cement plaster	102.232	SF	\$1.30	\$132 902
		Paint existing cement plaster	77.363	SF	\$2.00	\$154 726
		Miscellaneous painting	166.819	SF	\$1.00	\$166 819
		Scaffolding	102.232	SF	\$5.00	\$511 160
		Caulking and sealant	166.819	SF	\$1.80	\$300 274
		Miscellaneous wall repairs	1	LS	\$100,000.00	\$100 000
		Concrete seismic infill walls, Note 1	8	LOC	\$125 000.00	\$1 000 000
		(N) external wall structure & finishes@ junction (E) & demo portion of bldg	2	EA	\$200 000.00	\$400 000
		Construct (N) hall attached to bldg 3, 4 levels	1	LS	\$250 000.00	\$250 000
	EXTERIOR WALLS					\$6 529 186
B2020	EXTERIOR WINDOWS					
		Operable window w/ insulated glazing & alum frame				\$0
		4'x7'	16	EA	\$2 100.00	\$33 600
		6'x7'	12	EA	\$3 150.00	\$37 800
		12'x7'	2	EA	\$6 300.00	\$12 600
		Repair (e) window	596	EA	\$300.00	\$178 800
EXTERIOR WINDOWS						\$262 800

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS						
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total				
B2030	EXTERIOR DOORS		7 1	LV EA	\$2,600.00 \$4,000.00	\$18,200 \$4,000				
	EXTERIOR DOORS					\$22,200				
B3010	ROOF COVERINGS		2,052 2,052 1 2,052 2 1 1,500 1,500 5 1,500 5	SF SF LS SF EA LS SF SF EA SF EA	\$14.00 \$4.00 \$100,000.00 \$4.00 \$10,000.00 \$30,000.00 \$14.00 \$4.00 \$10,000.00 \$4.00 \$5,000.00	\$28,728 \$8,208 \$100,000 \$8,208 \$20,000 \$30,000 \$21,000 \$6,000 \$50,000 \$6,000 \$25,000				
	Roof coverings, (BUR) insulation @ (N) corridor									
	Gutter, downspouts @ (N) corridor									
	Expansion / seismic joint (N) to (E)									
	Misc roof sheet metal									
	Allowance for roof skylights@ (N) corridor									
	Miscellaneous									
	Roof coverings, (BUR) insulation @ (N) staircase									
	Gutter, downspouts @ (N) staircase									
	Expansion / seismic joint (N) to (E)									
B3020	Misc roof sheet metal									
	Miscellaneous @ ea staircase									
	ROOF COVERINGS					\$303,144				
B3020	ROOF OPENINGS		20 40	EA EA	\$1,500.00 \$900.00	\$30,000 \$36,000				
	Roof opening for HVAC equipment (allowance)									
	Pipe penetration (allowance)									
C1010	ROOF OPENINGS					\$66,000				
	PARTITIONS		77,344 8,736 77,344 11,900 6,220 1	SF SF SF LF LF LS	\$29.00 \$2.00 \$1.30 \$4.00 \$75.00 \$150,000.00	\$2,242,976 \$17,472 \$100,547 \$47,600 \$466,500 \$150,000				
	Partition (framing and gypsum board)									
C1010	Premium for smoke partition									
	Acoustic insulation									
	Floor base									
	3" wide touch rail @ (n) and (e) corridors									
	Column encasing / cover / misc attachments									
	PARTITIONS					\$3,025,095				

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A			Estimate: Concept Phase Floor Area: 166,819 Prepared IS			
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS			
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total	
C1020		INTERIOR DOORS					
		Interior HM frame/solid wood door/lever hardware, 3'x7'	250	LV	\$2,600.00	\$650,000	
		Interior HM frame/solid wood door/lever hardware, 3'x7'	19	PR	\$4,600.00	\$87,400	
		MH Fire door/frame/hardware @ stair	19	LV	\$10,000.00	\$190,000	
INTERIOR DOORS						\$927,400	
C1030		SPECIALTIES					
		Toilet/Bathroom accessories	148	RM	\$1,500.00	\$222,000	
		Premolded fiberglass shower stall	148	EA	\$1,600.00	\$236,800	
		Miscellaneous casework. No casement in residential units.	166,819	SF	\$5.00	\$834,095	
		Miscellaneous carpentry	166,819	SF	\$3.00	\$500,457	
		Miscellaneous specialties	166,819	SF	\$1.80	\$300,274	
		Fire extinguisher & cabinet	28	EA	\$375.00	\$10,500	
		Fire stopping	166,819	SF	\$1.00	\$166,819	
		Signage & graphic (allowance)	166,819	SF	\$1.30	\$216,865	
		Window blinds	626	EA	\$250.00	\$156,500	
		Residential appliances in units	148	EA	\$3,500.00	\$518,000	
		folding partitions	1	LS	\$50,000.00	\$50,000	
		Nurse stations	7	EA	\$30,000.00	\$210,000	
		Lockers	50	EA	\$350.00	\$17,500	
Domestic laundry appliances (central laundry room)				1	LS	\$50,000.00	
						\$50,000	
SPECIALTIES						\$3,489,810	
C3010		WALL FINISHES					
		Paint new partition	154,688	SF	\$1.50	\$232,032	
		Paint existing partition	172,640	SF	\$2.50	\$431,600	
		Paint door and frame	314	LV	\$144.00	\$45,216	
		Miscellaneous finish work, painting throughout	166,819	SF	\$3.00	\$500,457	
		Miscellaneous patching special finishes	166,819	SF	\$8.00	\$1,334,552	
		Wall protection, bumpers, handrails, FRP	1	LS	\$500,000.00	\$500,000	
WALL FINISHES						\$3,043,857	

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C3020		FLOOR FINISHES				
		VCT	163,683	SF	\$6 00	\$982,098
		Ceramic floor	3,136	SF	\$30.00	\$94,080
		Ceramic floor base	664	LF	\$15 00	\$9,960
		Patch / level (E) floors	166,819	SF	\$3 00	\$500,457
		FLOOR FINISHES				\$1,586,595
C3030		CEILING FINISHES				
		Suspended acoustical board ceiling	160,076	SF	\$6.00	\$960,456
		Gypsum board ceiling	6,743	SF	\$20.00	\$134,860
		Allowance bulkheads / soffits / reveals	1	LS	\$250,000.00	\$250,000
		CEILING FINISHES				\$1,345,316
D1010		OTHER CONVEYING SYSTEMS				
		ADA Compliant elevator, 6 stops	4	EA	\$250,000.00	\$1,000,000
		OTHER CONVEYING SYSTEMS				\$1,000,000
D1520		PLUMBING				
		Sanitary fixtures incl rough in				
		Connection pipework				
		Residential units				
		WC	148	EA	\$4,400.00	\$651,200
		Lavatory	148	EA	\$4,000.00	\$592,000
		Shower	148	EA	\$5,000.00	\$740,000
		Kitchen sink	148	EA	\$4,000.00	\$592,000
		Plumbing other areas	1	LS	\$800,000.00	\$800,000
		Metering, digital and remote reading	148	EA	\$350.00	\$51,800
		Fixtures allowance other areas	25	EA	\$5,000.00	\$125,000
		Condensate drainage	166,819	SF	\$0 15	\$25,023
		Floor drains, hosebibbs, cleanouts, etc	4	EA	\$850.00	\$3,400
		Grease inceptor, 1500 gallons	1	LS	\$12,000.00	\$12,000
		Kitchen equipment connections	166,819	SF	\$0 35	\$58,387
		Gas distribution	166,819	SF	\$0.85	\$141,796
		Testing & sterilization	383	HRS	\$110.00	\$42,130
		Backflow preventer, makeup water and metering for irrigation and landscaping	166,819	SF	\$0 25	\$41,705
		Fire stop, core drill, seismic bracing	166,819	SF	\$1 12	\$186,837
		Fuel oil distribution. EXCL				\$0
		Commissioning assistance	166,819	SF	\$0.65	\$108,432
		PLUMBING				\$4,171,710

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
D1530		HVAC				
		HVAC	166,819	SF	\$39.00	\$6,505,941
		HVAC				\$6,505,941
D1540		FIRE PROTECTION				
		Automatic wet pipe sprinkler system	166,819	SF	\$7.00	\$1,167,733
		FIRE PROTECTION				\$1,167,733
D5010		ELECTRICAL DISTRIBUTION				
		Power and devices	166,819	SF	\$13.02	\$2,171,983
		ELECTRICAL DISTRIBUTION				\$2,171,983
D5020		LIGHTING & BRANCH WIRING				
		Lighting, fixtures, grounding, conv power	166,819	SF	\$12.80	\$2,135,283
		LIGHTING & BRANCH WIRING				\$2,135,283
D5040		SPECIAL ELECTRICAL SYSTEMS				
		Fire alarm system				
		Telephone/data outlets, box and conduit only				
		Calbling				
		Call system				
		Paging, public address system, empty conduit only				
		A/v cable only				
		Wireless emerg call sys				
		Security system,				
		CCTV				
		Cable				
		Seismic bracing				
		All systems as noted above	166,819	SF	\$19.11	\$3,187,911
		SPECIAL ELECTRICAL SYSTEMS				\$3,187,911

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
F10		NON-HAZARDOUS BUILDING DEMOLITION				\$0
		Demolish north end of Wings L and O	37,415	SF	\$15.00	\$561,225
		Remove SOG/Footing and foundation, fill	8,341	SF	\$75.00	\$625,575
		Remove south side stairs @ bldg 2 & 3	2	EA	\$60,000.00	\$120,000
		Demolish remaining building interior finishes allowance (flooring, ceiling, partitions)	143,385	SF	\$12.00	\$1,720,620
		Demolish remaining building electrical allowance (power, lighting, special system)	143,385	SF	\$3.00	\$430,155
		Demolish remaining building mechanical allowance (plumbing and HVAC)	143,385	SF	\$6.00	\$860,310
		Cut open (e) concrete wall for door opening	118	EA	\$5,500.00	\$649,000
		Remove elevator	4	EA	\$3,600.00	\$14,400
		Remove trash chute	1	LS	\$1,800.00	\$1,800
		Remove linen chute	1	LS	\$1,800.00	\$1,800
F20		HAZARDOUS BUILDING DEMOLITION				\$0
		Hazard material abatement allowance	180,800	SF	\$5.00	\$904,000
		HAZARDOUS BUILDING DEMOLITION				\$904,000
		SITE PREPARATION				\$0
		Misc. site demolition	1	LS	\$30,000.00	\$30,000
		SITE PREPARATION				\$30,000

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL REPLACEMENT ASSISTED LIVING STUDIES. OPTION A				Estimate: Concept Phase Floor Area: 166,819 Prepared IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
G20		SITE IMPROVEMENT				
		Prep site	4,312	SF	\$1.80	\$7,762
		Grading and compaction	4,312	SF	\$5.40	\$23,285
		Loading dock				\$0
		Excavation for footing	15	CY	\$55.00	\$825
		Wall footing	138	LF	\$180.00	\$24,840
		12" Concrete wall	288	SF	\$62.00	\$17,856
		4" thick Aggregate base	9	CY	\$65.00	\$585
		Vapor barrier	696	SF	\$0.35	\$244
		2" Sand	4	CY	\$65.00	\$260
		6" Concrete slab	696	SF	\$12.00	\$8,352
		Structural steel support for canopy	1	LS	\$18,000.00	\$18,000
		Metal deck canopy	540	SF	\$54.00	\$29,160
		Incoming communication/ power Allow Adapt all other incoming MEP utilities to suit (N) bldg use	1	LS	\$150,000.00	\$150,000
		1	LS			\$0
		Miscellaneous site r/walls, paving re formation, landscape etc throughout external areas	1	LS	\$2,000,000.00	\$2,000,000
		Daycare play area	1	LS	\$75,000.00	\$75,000
						\$0
		SITE IMPROVEMENT				\$2,356,169

OPTION B



Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,		Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 IS	SF
El.	Section	Totals		Costs/SF
	UNIFORMAT SUMMARY			
A	SUBSTRUCTURE			
A10	FOUNDATIONS	\$6,584,000	\$6,584,000	\$28.28
A20	BASEMENT CONSTRUCTION	\$0		
B	SHELL			
B10	SUPERSTRUCTURE	\$14,450,920	\$28,667,721	\$62.07
B20	EXTERIOR CLOSURE	\$12,471,473		\$53.56
B30	ROOFING	\$1,745,328		\$7.50
C	INTERIORS			
C10	INTERIOR CONSTRUCTION	\$12,028,874	\$20,469,034	\$51.66
C30	INTERIOR FINISHES	\$8,440,160		\$36.25
D	SERVICES			
D10	CONVEYING SYSTEMS	\$720,000	\$28,662,168	\$3.09
D15	MECHANICAL	\$17,462,400		\$75.00
D50	ELECTRICAL	\$10,479,768		\$45.01
E	EQUIPMENT & FURNISHING			
E10	EQUIPMENT	\$1,188,500	\$1,530,765	\$5.10
E20	FURNISHINGS	\$342,265		\$1.47
F	SPECIAL CONSTRUCTION/DEMOLITION			
F10	SPECIAL CONSTRUCTION	\$275,000	\$4,975,800	\$1.18
F20	SELECTIVE BUILDING DEMOLITION	\$4,700,800		\$21.37
BUILDING COST		\$90,889,488		\$390.37
G	BUILDING SITework			
G10	SITE PREPARATION	\$4,000,000	\$13,225,000	\$17.18
G20	SITE IMPROVEMENT	\$8,000,000		\$34.36
G30	SITE/MECHANICAL UTILITIES	\$975,000		\$4.19
G40	SITE ELECTRICAL UTILITIES	\$250,000		\$1.07
G50	OTHER SITE CONSTRUCTION	\$0		
TOTAL DIRECT COSTS		\$104,114,488		\$447.17
GENERAL CONDITIONS, OH & P BOND, DESIGN CONTINGENCY		16.00% 2.00% 15.00%	\$15,617,173 \$1,197,317 \$18,139,347	\$67.07 \$5.14 \$77.91
ESTIMATE TOTAL			\$139,068,325	\$597.29

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,		Estimate Stage: Floor Area: Prepared by:	Concept Stage 232832 SF IS		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
	DETAILED SUMMARY				
A10	FOUNDATIONS				
A1010	FOUNDATIONS	232,832	GFA	\$4.57	\$1,064 000
A1020	SPECIAL FOUNDATIONS	232,832	GFA	\$20.62	\$4,800,000
A1030	SLAB ON GRADE	232,832	GFA	\$3.09	\$720,000
	FOUNDATIONS				\$6,584 000
B10	SUPERSTRUCTURE				
B1010	FLOOR CONSTRUCTION	232,832	GFA	\$40.49	\$9,426,880
B1020	ROOF CONSTRUCTION	232,832	GFA	\$19.68	\$4,583,040
B1030	STAIR CONSTRUCTION	232,832	GFA	\$1.89	\$441,000
	SUPERSTRUCTURE				\$14,450,920
B20	EXTERIOR CLOSURE				
B2010	EXTERIOR WALLS	232,832	GFA	\$35.00	\$8,149 100
B2020	EXTERIOR WINDOWS	232,832	GFA	\$17.85	\$4,156,075
B2030	EXTERIOR DOORS	232,832	GFA	\$0.71	\$166,298
	EXTERIOR CLOSURE				\$12,471,473
B30	ROOFING				
B3010	ROOF COVERINGS	232,832	GFA	\$7.35	\$1,710,328
B3020	ROOF OPENINGS	232,832	GFA	\$0.15	\$35,000
	ROOFING				\$1,745,328
C10	INTERIOR CONSTRUCTION				
C1010	PARTITIONS	232,832	GFA	\$24.72	\$5,755,136
C1020	INTERIOR DOORS	232,832	GFA	\$9.18	\$2,138,112
C1030	SPECIALTIES	232,832	GFA	\$17.76	\$4,135,626
	INTERIOR CONSTRUCTION				\$12,028,874
C30	INTERIOR FINISHES				
C3010	WALL FINISHES	232,832	GFA	\$12.15	\$2,828,909
C3020	FLOOR FINISHES	232,832	GFA	\$13.43	\$3,126,934
C3030	CEILING FINISHES	232,832	GFA	\$10.67	\$2,484,317
	INTERIOR FINISHES				\$8,440,160

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,		Estimate Stage: Floor Area: Prepared by:	Concept Stage 232832 SF IS		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
D10	CONVEYING SYSTEMS				
D1010	ELEVATORS & LIFTS	232,832	GFA	\$3.09	\$720,000
	CONVEYING SYSTEMS				\$720,000
D15	MECHANICAL				
D1520	PLUMBING	232,832	GFA	\$29.00	\$6,752,128
D1530	HVAC	232,832	GFA	\$39.00	\$9,080,448
D1540	FIRE PROTECTION	232,832	GFA	\$7.00	\$1,629,824
	MECHANICAL				\$17,462,400
D50	ELECTRICAL				
D5010	ELECTRICAL DISTRIBUTION	232,832	GFA	\$13.07	\$3,043,114
D5020	LIGHTING & BRANCH WIRING	232,832	GFA	\$11.50	\$2,677,568
D5040	SPECIAL ELECTRICAL SYSTEMS	232,832	GFA	\$20.44	\$4,759,086
	ELECTRICAL				\$10,479,768
E10	EQUIPMENT				
E1059	MISCELLANEOUS EQUIPMENT	232,832	GFA	\$5.10	\$1,188,500
	EQUIPMENT				\$1,188,500
E20	FURNISHINGS				
E2010	FIXED FURNISHINGS	232,832	GFA	\$1.47	\$342,265
E2020	MOVABLE FURNISHINGS	232,832	GFA	\$0.00	\$0
	FURNISHINGS				\$342,265
F10	SPECIAL CONSTRUCTION				
F1011	AIR SUPPORTED STRUCTURES	232,832	GFA		
F1012	PRE-ENGINEERED STRUCTURES	232,832	GFA		
F1013	OTHER SPECIAL STRUCTURES	232,832	GFA		
F1021	INTEGRATED ASSEMBLIES	232,832	GFA		
F1022	SPECIAL PURPOSE ROOMS	232,832	GFA		
F1023	OTHER INTEGRATED STRUCTURES	232,832	GFA		
F1031	_SOUND, VIBRATION, SEISMIC	232,832	GFA		
F1032	RADIATION PROTECTION	232,832	GFA		
F1033	SPECIAL SECURITY ROOMS	232,832	GFA		
F1034	OTHER SPECIAL CONSTRUCTION	232,832	GFA	\$1.18	\$275,000
	SPECIAL CONSTRUCTION				\$275,000

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,		Estimate Stage: Floor Area: Prepared by:	Concept Stage 232832 SF IS		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
F20	SELECTIVE BUILDING DEMOLITION				
F2010	BUILDING DEMOLITION	232,832	GFA	\$16.31	\$3,796,800
F2020	HAZARDOUS COMPONENTS ABATEMENT	232,832	GFA	\$3.88	\$904,000
	SELECTIVE BUILDING DEMOLITION				\$4,700,800
G	BUILDING SITE WORK				
G10	SITE PREPARATION	232,832	GFA	\$17.18	\$4,000,000
G20	SITE IMPROVEMENT	232,832	GFA	\$34.36	\$8,000,000
G30	SITE/MECHANICAL UTILITIES	232,832	GFA	\$4.19	\$975,000
G40	SITE ELECTRICAL UTILITIES	232,832	GFA	\$1.07	\$250,000
G50	OTHER SITE CONSTRUCTION	232,832	GFA	\$0.00	\$0
	BUILDING SITE WORK				\$13,225,000
	TOTAL DIRECT COSTS				\$104,114,488
	GENERAL CONDITIONS, OVERHEAD, PROFIT BOND,	15.00% 1.00%	% %	67.07 5.14	\$15,617,173 \$1,197,317
	Sub-Total				\$120,928,978
	DESIGN CONTINGENCY	15.00%	%	77.91	\$18,139,347
	ESTIMATE TOTAL			597.29	\$139,068,325

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
A1010		FOUNDATIONS Wall footing/Grade beam/ spread footings	76,000	SF	\$14.00	\$1,064,000
		FOUNDATIONS				\$1,064,000
A1020		SPECIAL FOUNDATIONS Matt slab Allowance for sloping site premium Allowance for basement construction. Utility basement only not covering full footprint	40,000 1 1	SF LS LS	\$75.00 \$800,000.00 \$1,000,000.00	\$3,000,000 \$800,000 \$1,000,000
		SPECIAL FOUNDATIONS				\$4,800,000
A1030		SLAB ON GRADE SOG & thicknessings Elevator pit	36,000 4	SF EA	\$18.00 \$18,000.00	\$648,000 \$72,000
		SLAB ON GRADE				\$720,000
B1010		FLOOR CONSTRUCTION Concrete structure Allowance for miscellaneous decks & terraces.	156,448 1	SF LS	\$60.00 \$40,000.00	\$9,386,880 \$40,000
		FLOOR CONSTRUCTION				\$9,426,880
B1020		ROOF CONSTRUCTION Concrete structure	76,384	SF	\$60.00	\$4,583,040
		ROOF CONSTRUCTION				\$4,583,040

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B1030		STAIR CONSTRUCTION Stair structure. Floor to Floor. Allow 4 staircases Stair railing Stair/rail to elevator machine room	16.0 16.0 1	ft ft ea	\$17,000.00 \$10,000.00 \$9,000.00	\$272,000 \$160,000 \$9,000
		STAIR CONSTRUCTION				\$441,000
B2010		EXTERIOR WALLS Exterior wall system, stud, stucco, insul, int lining, paint, misc soffits, copings, guardrails etc	162,982	SF	\$50.00	\$8,149.100
		EXTERIOR WALLS				\$8,149.100
B2020		EXTERIOR WINDOWS Allow 30% of ext wall	48,895	SF	\$85.00	\$4,156.075
		EXTERIOR WINDOWS				\$4,156.075
B2030		EXTERIOR DOORS Allowance	237,568	SF	\$0.70	\$166,298
		EXTERIOR DOORS				\$166,298

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B3010		ROOF COVERINGS				
		Roofing system, single ply membrane & insulation and surface coating	76,384	SF	\$13.00	\$992,992
		Walking surface	3,000	SF	\$10.00	\$30,000
		Flashing and miscellaneous sheet metal	76,384	SF	\$4.00	\$305,536
		Scupper	1	LS	\$30,000.00	\$30,000
		Rain water leader	1	LS	\$60,000.00	\$60,000
		Seismic joints	1	LS	\$150,000.00	\$150,000
		Parapets roof coverings	1	LS	\$75,000.00	\$75,000
		Roof ladder	4	ea	\$3,000.00	\$12,000
		Roof hatch	4	ea	\$1,200.00	\$4,800
		Window washing davit pedestal, install only		Excl		\$0
		Mech screens	1	LS	\$50,000.00	\$50,000
		ROOF COVERINGS				\$1,710,328
B3020		ROOF OPENINGS				
		Allowance	1	LS	\$35,000.00	\$35,000
C1010		PARTITIONS				
		Column covers / features	1	LS	\$200,000.00	\$200,000
C1020		Partitions. mtl stud, Gypsum BS, Insul, Borrowed lites	232,832 5,000	GSF SF	\$23.00 \$40.00	\$5,355,136 \$200,000
		PARTITIONS				\$5,755,136
C1020		INTERIOR DOORS				
		Interior doors, frames hardware, special door features	237,568	SF	\$9.00	\$2,138,112
		INTERIOR DOORS				\$2,138,112

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C1030		SPECIALTIES				
		Toilet accessories resident bathrms	251	RMS	\$1,500.00	\$376,500
		Toilet accessories other areas	1	LS	\$20,000.00	\$20,000
		Miscellaneous casework throughout, resident rooms. None reqd	250	EA		
		Miscellaneous casement throughout other areas	232,832	SF	\$5.00	\$1,164 160
		Wall casework unit. Allowance	500	LF	\$350.00	\$175 000
		Storage units . Allowance	500	LF	\$500.00	\$250,000
		Shelving. Allowance	500	LF	\$250.00	\$125,000
		Markerboard	20	EA	\$800.00	\$16,000
		Lockers	50	EA	\$350.00	\$17,500
		Nurse stations	8	EA	\$30,000.00	\$240,000
		Phone kiosk	8	EA	\$2,500.00	\$20,000
		Firestopping , caulk & safing throughout	232,832	SF	\$0.75	\$174 624
		Signage	232,832	SF	\$1.30	\$302,682
		Folding partitions	1	LS	\$75,000.00	\$75,000
		Fire extinguishers	40	EA	\$375.00	\$15,000
		Miscellaneous metalwork	232,832	SF	\$3.00	\$698 496
		Miscellaneous carpentry	232,832	SF	\$1.00	\$232,832
		Miscellaneous specialties	232,832	SF	\$1 00	\$232,832
		SPECIALTIES				\$4,135 626
C3010		WALL FINISHES				
		Wall finishes throughout, corner guards, bumper guards / handrails, acrovyn wainscots, FRP / stainless stl.	232,832	SF	\$12 15	\$2,828,909
		WALL FINISHES				\$2,828,909
C3020		FLOOR FINISHES				
		Floor finishes throughout. Carpet, VCT, tile, lino, rubber, stairs	232,832	SF	\$13 43	\$3,126,934
		FLOOR FINISHES				\$3 126 934

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C3030		CEILING FINISHES Ceilings throughout, Gyp, ACT, bulkheads	232,832	SF	\$10.67	\$2,484,317
		CEILING FINISHES				\$2,484,317
D1010		ELEVATORS & LIFTS Elevator, 5000 lb, 4 stops Rubbish shutes. Not reqd Linen shutes. Not reqd Dumb waiter, 4 stops. Not reqd	4	EA	\$180,000.00	\$720,000
		ELEVATORS & LIFTS				\$720,000
D1520		PLUMBING	232,832	SF	\$29.00	\$6,752,128
		PLUMBING				\$6,752,128
D1530		HVAC	232,832	SF	\$39.00	\$9,080,448
		HVAC				\$9,080,448
D1540		FIRE PROTECTION	232,832	SF	\$7.00	\$1,629,824
		FIRE PROTECTION				\$1,629,824
D5010		ELECTRICAL DISTRIBUTION	232,832	SF	\$13.07	\$3,043,114
		ELECTRICAL DISTRIBUTION				\$3,043,114
D5020		LIGHTING & BRANCH WIRING	232,832	SF	\$11.50	\$2,677,568
		LIGHTING & BRANCH WIRING				\$2,677,568

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
D5040		SPECIAL ELECTRICAL SYSTEMS	232,832	SF	\$20.44	\$4,759,086
		SPECIAL ELECTRICAL SYSTEMS				\$4,759,086
E1059		MISCELLANEOUS EQUIPMENT				
		Window washing equipment	1	LS	\$75,000.00	\$75,000
		Laundry chute. Not reqd				
		Food service storage / servery equipment at each floor.	4	EA	\$7,500.00	\$30,000
		Bathtub with powered lift	4	EA	\$25,000.00	\$100,000
		Ceiling lift system	2	EA	\$15,000.00	\$30,000
		Residential appliances in resident rms	251	RMS	\$3,500.00	\$878,500
		Main kitchen equipment. Reheat facility only.				
		Meals outsourced	1	LS	\$50,000.00	\$50,000
		Laundry equipment. Domestic equipment only in laundry room	1	LS	\$25,000.00	\$25,000
		MISCELLANEOUS EQUIPMENT				\$1,188.500
E2010		FIXED FURNISHINGS				
		Window blinds	48,895	SF	\$7.00	\$342,265
		FIXED FURNISHINGS				\$342,265
E2020		MOVABLE FURNISHINGS				
		MOVABLE FURNISHINGS				
F1011		AIR SUPPORTED STRUCTURES				
		AIR SUPPORTED STRUCTURES				

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
F1012		PRE-ENGINEERED STRUCTURES				
		PRE-ENGINEERED STRUCTURES				
F1013		OTHER SPECIAL STRUCTURES				
		OTHER SPECIAL STRUCTURES				
F1021		INTEGRATED ASSEMBLIES				
		INTEGRATED ASSEMBLIES				
F1022		SPECIAL PURPOSE ROOMS				
		SPECIAL PURPOSE ROOMS				
F1023		OTHER INTEGRATED STRUCTURES				
		OTHER INTEGRATED STRUCTURES				
F1031		SOUND, VIBRATION, SEISMIC				
		SOUND, VIBRATION, SEISMIC				
F1032		RADIATION PROTECTION				
		RADIATION PROTECTION				

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
F1033		SPECIAL SECURITY ROOMS				
		SPECIAL SECURITY ROOMS				
F1034		OTHER SPECIAL CONSTRUCTION				
		Allowance for computer room	1	LS	\$25,000.00	\$25,000
		Allowance to fit out ADHC areas	1	LS	\$50,000.00	\$50,000
		Allowance to fit out CDC areas	1	LS	\$50,000.00	\$50,000
		Allowance for isolation rooms	1	LS	\$50,000.00	\$50,000
		Loading Dock	1	LS	\$100,000.00	\$100,000
		OTHER SPECIAL CONSTRUCTION				\$275,000
F1053		OTHER SPECIAL CONTROLS				
		OTHER SPECIAL CONTROLS				
F2010		BUILDING DEMOLITION				
		Demo buildings 2 & 3, wards O,L,M,K	180,800	SF	\$21.00	\$3,796,800
		BUILDING DEMOLITION				\$3,796,800
F2020		HAZARDOUS COMPONENTS ABATEMENT				
		Hazmat removal prior to demo	180,800	SF	\$5.00	\$904,000
		HAZARDOUS COMPONENTS ABATEMENT				\$904,000
G10		SITE PREPARATION				
		Fill, excavate. Allowance	1	LS	\$4,000,000.00	\$4,000,000
		SITE PREPARATION				\$4,000,000

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION B,			Estimate Stage: Floor Area: Prepared by:	Concept Stage 232,832 SF IS		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
G20		SITE IMPROVEMENT				
		Site work, paving, landscape, Allowance	1	LS	\$8,000,000.00	\$8,000,000
		SITE IMPROVEMENT				\$8,000,000
G30		SITE/MECHANICAL UTILITIES				
		(N) storm drainage	1	LS	\$300,000.00	\$300,000
		(N) sanitary sewer drainage	1	LS	\$500,000.00	\$500,000
		(N) incoming fire water	1	LS	\$100,000.00	\$100,000
		(N) incoming domestic water	1	LS	\$75,000.00	\$75,000
		SITE/MECHANICAL UTILITIES				\$975,000
G40		SITE ELECTRICAL UTILITIES				
		Allowance	1	LS	\$250,000.00	\$250,000
		SITE ELECTRICAL UTILITIES				\$250,000
G50		OTHER SITE CONSTRUCTION				
		OTHER SITE CONSTRUCTION				

OPTION C



Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)		Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB
		Totals	
El.	Section		Costs/SF
	UNIFORMAT SUMMARY		
A	SUBSTRUCTURE		
A10	FOUNDATIONS	\$3,346,626	\$16.45
A20	BASEMENT CONSTRUCTION		
B	SHELL		
B10	SUPERSTRUCTURE	\$12,802,188	\$62.95
B20	EXTERIOR CLOSURE	\$12,007,257	\$59.04
B30	ROOFING	\$925,260	\$4.55
C	INTERIORS		
C10	INTERIOR CONSTRUCTION	\$18,703,814	\$91.96
C30	INTERIOR FINISHES	\$7,827,467	\$38.49
D	SERVICES		
D10	CONVEYING SYSTEMS	\$1,350,000	\$6.64
D15	MECHANICAL	\$19,728,345	\$97.00
D50	ELECTRICAL	\$11,186,175	\$55.00
E	EQUIPMENT & FURNISHING		
E10	EQUIPMENT	\$1,364,000	\$6.71
E20	FURNISHINGS	\$65,250	\$0.32
F	SPECIAL CONSTRUCTION/DEMOLITION		
F10	SPECIAL CONSTRUCTION	\$110,000	\$0.54
F20	SELECTIVE BUILDING DEMOLITION		
BUILDING COST		\$89,416,382	\$439.64
G	BUILDING SITWORK		
G10	SITE PREPARATION	\$250,000	\$1.23
G20	SITE IMPROVEMENT	\$2,500,000	\$12.29
G30	SITE/MECHANICAL UTILITIES	\$400,000	\$1.97
G40	SITE ELECTRICAL UTILITIES	\$250,000	\$1.23
G50	OTHER SITE CONSTRUCTION		
TOTAL DIRECT COSTS		\$92,816,382	\$456.36
GENERAL CONDITIONS, OH & P		16.00%	\$14,850,621
BOND		2.00%	\$2,153,340
DESIGN CONTINGENCY		15.00%	\$16,473,051
ESTIMATE TOTAL			\$126,293,394
			\$620.96

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)		Estimate Stage: Floor Area: Prepared by:	Concept Stage 203385 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
	DETAILED SUMMARY				
A10	FOUNDATIONS				
A1010	FOUNDATIONS	203,385	GFA	2.20	446,887
A1020	SPECIAL FOUNDATIONS	203,385	GFA	11.11	2,258,892
A1030	SLAB ON GRADE	203,385	GFA	3.15	640,847
	FOUNDATIONS				3,346,626
B10	SUPERSTRUCTURE				
B1010	FLOOR CONSTRUCTION	203,385	GFA	51.93	10,561,671
B1020	ROOF CONSTRUCTION	203,385	GFA	7.21	1,465,517
B1030	STAIR CONSTRUCTION	203,385	GFA	3.81	775,000
	SUPERSTRUCTURE				12,802,188
B20	EXTERIOR CLOSURE				
B2010	EXTERIOR WALLS	203,385	GFA	42.93	8,731,794
B2020	EXTERIOR WINDOWS	203,385	GFA	15.29	3,110,213
B2030	EXTERIOR DOORS	203,385	GFA	0.81	165,250
	EXTERIOR CLOSURE				12,007,257
B30	ROOFING				
B3010	ROOF COVERINGS	203,385	GFA	4.37	889,760
B3020	ROOF OPENINGS	203,385	GFA	0.17	35,500
	ROOFING				925,260
C10	INTERIOR CONSTRUCTION				
C1010	PARTITIONS	203,385	GFA	59.12	12,024,679
C1020	INTERIOR DOORS	203,385	GFA	16.03	3,260,634
C1030	SPECIALTIES	203,385	GFA	16.81	3,418,501
	INTERIOR CONSTRUCTION				18,703,814
C30	INTERIOR FINISHES				
C3010	WALL FINISHES	203,385	GFA	14.76	3,002,860
C3020	FLOOR FINISHES	203,385	GFA	13.03	2,650,014
C3030	CEILING FINISHES	203,385	GFA	10.69	2,174,593
	INTERIOR FINISHES				7,827,467

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)		Estimate Stage: Floor Area: Prepared by:	Concept Stage 203385 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
D10	CONVEYING SYSTEMS				
D1010	ELEVATORS & LIFTS	203,385	GFA	6.64	1,350,000
	CONVEYING SYSTEMS				1,350,000
D15	MECHANICAL				
D1520	PLUMBING	203,385	GFA	38.00	7,728,630
D1530	HVAC	203,385	GFA	50.00	10,169,250
D1540	FIRE PROTECTION	203,385	GFA	9.00	1,830,465
	MECHANICAL				19,728,345
D50	ELECTRICAL				
D5010	ELECTRICAL DISTRIBUTION	203,385	GFA	16.00	3,254,160
D5020	LIGHTING & BRANCH WIRING	203,385	GFA	14.00	2,847,390
D5040	SPECIAL ELECTRICAL SYSTEMS	203,385	GFA	25.00	5,084,625
	ELECTRICAL				11,186,175
E10	EQUIPMENT				
E1059	MISCELLANEOUS EQUIPMENT	203,385	GFA	6.71	1,364,000
	EQUIPMENT				1,364,000
E20	FURNISHINGS				
E2010	FIXED FURNISHINGS	203,385	GFA	0.32	65,250
	FURNISHINGS				65,250
F10	SPECIAL CONSTRUCTION				
F1034	OTHER SPECIAL CONSTRUCTION	203,385	GFA	0.54	110,000
	SPECIAL CONSTRUCTION				110,000
G	BUILDING SITE WORK				
G10	SITE PREPARATION	203,385	GFA	1.23	250,000
G20	SITE IMPROVEMENT	203,385	GFA	12.29	2,500,000
G30	SITE/MECHANICAL UTILITIES	203,385	GFA	1.97	400,000
G40	SITE ELECTRICAL UTILITIES	203,385	GFA	1.23	250,000
G50	OTHER SITE CONSTRUCTION				
	BUILDING SITE WORK				3,400,000

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)		Estimate Stage: Floor Area: Prepared by:	Concept Stage 203385 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
	TOTAL DIRECT COSTS				92,816,382
	GENERAL CONDITIONS, OVERHEAD & PROFIT BOND	16.00% 2.00%			14,850,621 2,153,340
	Sub-Total				109,820,343
	DESIGN CONTINGENCY	15.00%			16,473,051
	Sub-Total				126,293,394
	ESTIMATE TOTAL				126,293,394

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
A1010		FOUNDATIONS				
		Wall footing/Grade beam:				
		Excavation and off haul/backfill	202	cy	45.00	9,090
		Form top edge	2,123	lf	14.00	29,722
		Concrete material 5 kpi	202	cy	320.00	64,663
		Concrete placing	202	cy		
		Rebar	38,091	lb	1.15	43,805
		Spread footing:				
		Excavation and off haul/backfill	323	cy	45.00	14,535
		Form top edge	1,428	lf	14.00	19,992
		Concrete material 5 kpi	323	cy	320.00	103,360
		Concrete placing	323	cy		
		Rebar	32,391	lb	1.15	37,250
		Mechanical coupler	408	ea	40.00	16,320
		Set anchor bolts	103	set	700.00	72,100
		Grout base plates	103	ea	350.00	36,050
		FOUNDATIONS				446,887
A1020		SPECIAL FOUNDATIONS				
		Pile cap/mat footing:				
		Excavation and off haul	981	cy	45.00	44,145
		Form top edge	1,445	lf	15.00	21,675
		Concrete material 5 kpi	981	cy	320.00	314,071
		Concrete placing	981	cy		
		Rebar	230,001	lb	1.15	264,501
		Micropiles 7-5/8" dia pipe with 12" dia grout				
		Mobilization/demobilization	1	ls	25000.00	25,000
		Pre-production test	1	ls	15000.00	15,000
		Tension proof test, 5% of total	13	ea	4000.00	52,000
		Disposal of drill spoil & grout spoil	702	cy	25.00	17,550
		Compressive waterproof filler at top	250	ea	75.00	18,750
		P1: Vertical 20' bond length., 15' unbond	20	ea	4000.00	80,000
		P2: Vertical 35' bond length & 15' unbond	6	ea	4500.00	27,000
		P3: Raked 35' bond length & 15' unbond	216	ea	6200.00	1,339,200
		P4: raked 20' bond length., 15' unbond	8	ea	5000.00	40,000
		SPECIAL FOUNDATIONS				2,258,892

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
A1030		SLAB ON GRADE				
		Aggregated base, 6" thick	540	cy	55.00	29,700
		Vapor barrier	29,176	sf	0.45	13,129
		Slab on grade				
		Concrete material 3500 psi	581	cy	320.00	185,920
		Concrete placing	581	cy		
		Rebar	112,380	lb	1.15	129,237
		Misc. formwork	29,747	sf	3.00	89,241
		Concrete finishes	29,176	sf	1.35	39,388
		Thickening @ grade beams, spread footings & pile caps	256	cy	400.00	102,400
		Elevator pit 10'x10'x4' D	1	ea	18000.00	18,000
		Elevator pit 20'x11'x4' D	1	ea	25000.00	25,000
		Waterproofing for elevator pits	736	sf	12.00	8,832
		SLAB ON GRADE				640,847
B1010		FLOOR CONSTRUCTION				
		Structural steel	2,000	ton	3500.00	7,000,000
		Premium for exposed-to-view canopy framing.				
		AESS	2,275	sf	28.00	63,700
		Steel deck				
		Type 1: 20 gax3"	138,178	sf	5.00	690,889
		Type 2: 20 gax2"	20,579	sf	5.00	102,895
		Type 3: 18 gax3"	12,830	sf	5.00	64,151
		Light Wt. concrete fill				
		Type 1: 3-1/4" thick with #4 @ 12" ew	138,178	sf	9.00	1,243,601
		Type 2: 2-1/2" Min. with #4 @ 12" ew	20,579	sf	9.00	185,211
		Type 3: 3-1/4" Max with #4 @ 12" ew	12,830	sf	9.00	115,471
		Added rebar	117,909	lb	1.15	135,596
		Formwork for depressed slab	4,915	lf	8.00	39,320
		1/4" x2' wide x 6" H edge folder plate form , curved @ terrace	192	lf	300.00	57,600
		Fireproofing steel frame	2,000	ton	350.00	700,000
		Fireproofing deck (@ type 2 deck only)	20,579	sf	3.00	61,737
		Seismic joint @ floor and slab				
		Misc. concrete	203,000	gsf	0.50	101,500
		FLOOR CONSTRUCTION				10,561,671

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B1020		ROOF CONSTRUCTION				
		Structural framing	220	ton	3500.00	770,000
		Steel deck				
		Type 1: 20 gax3"	29,368	sf	5.00	146,840
		Type 5: 18 gax3"	2,365	sf	5.00	11,825
		Light Wt. concrete fill				
		Type 1: 3-1/4" thick with #4 @ 12" ew	29,368	sf	9.50	278,996
		Type 5: no concrete topping		None		
		Added rebar	29,635	lb	1.15	34,081
		1-1/2" Rod bracing	610	lf	50.00	30,500
		1/4" x2' wide x 6" H edge folder plate form , curved				
		@ terrace	32	lf	300.00	9,600
		Premium for detailing @ davit	70	ea	500.00	35,000
		Fireproofing steel frame	220	ton	350.00	77,000
		18" House-keeping pads for HVAC on roof	2,867	sf	25.00	71,675
		ROOF CONSTRUCTION				1,465,517
B1030		STAIR CONSTRUCTION				
		Stair structure	25.5	ft	18000.00	459,000
		Stair railing	25.5	ft	12000.00	306,000
		Stair/rail to elevator machine room	1	ea	10000.00	10,000
		STAIR CONSTRUCTION				775,000

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B2010		EXTERIOR WALLS				
		Metal stud framing (Stud thickness):				
		6"	95,227	sf	12 00	1 142 724
		4" & 6"	4,124	sf	18 00	74 232
		6" & 6"	7,773	sf	20 00	155 460
		5/8" Exterior gypsum sheathing	113,259	sf	4 00	453 037
		5/8" gypsum sheathing @ inside face of exterior wall	70,548	sf	5 00	352 740
		Exterior wall insulation	98,982	sf	1 50	148,473
		Mechanical screen wall (sheathing and framing)	4,047	sf	35 00	141 645
		Cement plaster finish, with integral color	104,844	sf	20 00	2 096 880
		Venetian plaster	23,112	sf	40 00	924 480
		Scratch & brown coats @ Venetian plaster	23,112	sf	13 00	300 456
		Mock up for Venetian plaster	1	ls	6000 00	6 000
		Plaster ceiling @ terrace soffit	2,275	sf	40 00	91,000
		Corrugated metal siding @ backside of parapet and screen wall	6,118	sf	25 00	152 950
		6"x1-2" Steel tube for Living Room Tower wall cap	132	lf	500 00	66,000
		6"x6" Steel tube for Living Room Tower wall cap	132	lf	250 00	33 000
		8"x8" Steel tube for mechanical screen wall cap	359	lf	300 00	107 700
		Metal stud wall cap for parapet wall	1,256	lf	35 00	43,960
		Painted metal coping @ Living Room Tower parapet wall, 1'-6" wide	132	lf	70 00	9,240
		Painted metal coping @ mechanical screen wall, 10" wide	359	lf	50 00	17 950
		Painted metal coping @ high parapet, 9" wide	63	lf	50 00	3,150
		Painted metal coping @ parapet wall, 8" wide	1,256	lf	50 00	62,800
		Base flashing	2,156	lf	20 00	43 120
		16 ga. Brake-formed window support surround weld to studs	15,957	lf	40 00	638,280
		3" Aluminum reveal	604	lf	42 00	25,368
		3/4" Aluminum reveal	12,445	lf	10 00	124 450
		5"x1-6" Aluminum wall louver	1	ea	800 00	800
		3"x3" Aluminum wall louver	3	ea	700 00	2 100
		2'-6"x2'6" Openable panel	2	ea	700 00	1 400
		Terrace steel guardrail, 3' H	270	lf	550 00	148 500
		Parapet wall railing	937	lf	300 00	281 100
		Seismic joint @ wall		with Connector		
		Extruded alum fin, 8" wide x 4' long, with alum end plates and SS wires for pigeon control	18	ea	500 00	9 000
		Closure cap @ window sill	69	lf	300 00	20 700
		Scaffolding	127,956	sf	5 00	639 780
		Paint inside	70,548	sf	1 00	70,548
		Paint steel tube column	352	lf	15 00	5 280
		Paint parapet wall railing	937	lf	3 00	2 811
		Paint balcony/terrace guardrail	270	lf	8 00	2 160
		Paint aluminum reveal	13,049	lf	2 00	26 098
		Paint miscellaneous	1	ls	17000 00	17,000
		Paint exterior cement plaster		with cement plaster		
		Firesafing @ floors	8,124	lf	10 00	81 240
		Firesafing @ roof	1,354	lf	12 00	16 248
		Caulking and sealant	127,956	sf	1 50	191 934
		EXTERIOR WALLS				8 731 794

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B2020		EXTERIOR WINDOWS				
		Operable window w/ insulated glazing & alum frame:				
		Type A1 - 3'-0"x6'	220	ea	1756.00	386,320
		Operable window w/ laminated safety glass with heat strengthened glass on the inside light and tempered glass on the outside light and aluminum frame (West Residence Only per A8.29):				
		Type A1 - 3'-0"x6'	55	ea	2195.00	120,725
		Type A2 - 4"x7'	72	ea	3190.00	229,680
		Type A3 - 2'-9"x6'	10	ea	1857.50	18,575
		Type A4 - 2'-9"x7'	8	ea	2167.50	17,340
		Type A5 - 3"x7'	40	ea	2362.50	94,500
		Premium for operable windows	405	ea	1125.00	455,625
		Fixed window w/ insulated glazing & alum frame:				
		Type B1 - 4'-10"x7'-2"	30	ea	3118.00	93,540
		Type B2 - 4'-10"x8'-2"	12	ea	3552.00	42,624
		Type B3 - 3'-9"x7'-2"	20	ea	2420.00	48,400
		Type B4 - 3'-9"x8'-2"	6	ea	2758.00	16,548
		Type B5 - 4'-4"x7'-2"	20	ea	2796.00	55,920
		Type B6 - 4'-4"x8'-2"	6	ea	3184.00	19,104
		Type B7 - 4"x8'-2"	2	ea	2942.00	5,884
		Type D1 - 3'-6"x10'-4"	60	ea	3254.00	195,240
		Type D2 - 3'-6"x11'-10"	12	ea	3724.00	44,688
		Type D3 - 3'-6"x11'-2"	12	ea	3520.00	42,240
		Type D4 - 3'-2"x10'-4"	45	ea	2948.00	132,660
		Type D5 - 3'-2"x11'-10"	9	ea	3374.00	30,366
		Type D6 - 3'-2"x11'-2"	9	ea	3188.00	28,692
		Type D7 - 3'-0"x7'-8"	6	ea	1900.00	11,400
		Type D8 - 17"x7'-8"	1	ea	11736.00	11,736
		Type D9 - 11'-6"x7'-8"	1	ea	7940.00	7,940
		Type D10 - 17"x10'-4"	4	ea	15806.00	63,224
		Type D11 - 11'-6"x10'-4"	4	ea	10692.00	42,768
		Type D12 - 17"x11'-10"	1	ea	18100.00	18,100
		Type D13 - 1'-6"x11'-10"	1	ea	1598.00	1,598
		Type D14 - 17"x11'-2"	1	ea	17092.00	17,092
		Type D15 - 11'-6"x11'-2"	1	ea	11562.00	11,562
		Type D16 - 3"x6'-6"	2	ea	1756.00	3,512
		Type E1 - 5"x7'-2"	10	ea	3228.00	32,280
		Type E2 - 5"x8'-2"	4	ea	3678.00	14,712
		Type F - 2'x2'	25	ea	360.00	9,000
		Type G - 4'x4'	7	ea	1440.00	10,080
		Type H1 - 3'x4'-6"	10	ea	1216.00	12,160
		Type H2 - 3'x5'	2	ea	1350.00	2,700
		Type H3 - 2'-9"x7'-8"	1	ea	1900.00	1,900
		Type J1 - 10'x4'-6"	5	ea	4050.00	20,250
		Type J2 - 10'x5'	2	ea	4500.00	9,000
		Premium for integral blind	17548	sf	32.00	561,536
		Fixed tempered glass panel @ Balcony	1232	sf	56.00	68,992
		Mock up & testing	1	ls	100000.00	100,000
		EXTERIOR WINDOWS				3,110,213

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B2030		EXTERIOR DOORS				
		HM frame/door/hardware				
		3'x7'	13	lv	2350 00	30,550
		4'x7'	6	lv	2400 00	14,400
		4'-8"x7'	2	lv	2700 00	5,400
		Aluminum frame/door/hardware				
		(2) 3'-8"x7'	3	pr	5500 00	16,500
		3'x7'	1	lv	2300 00	2,300
		3'x7'-4"	10	lv	2500 00	25,000
		3'x8'-4"	4	lv	2500 00	10,000
		4'x7'-4"	5	lv	2500 00	12,500
		4'x8'-4"	3	lv	2700 00	8,100
		Add for automatic door operator for entry doors	3	ea	5000 00	15,000
		Power assist device	17	ea	1500 00	25,500
		EXTERIOR DOORS				165,250
B3010		ROOF COVERINGS				
		Roofing system, single ply membrane & insulation and surface coating	30,380	sf	14 00	425,320
		Galvanized sheet metal roofing	102	sf	30 00	3,060
		Terrace/balcony paving	1,950	sf	18 00	35,100
		Waterproofing for terrace/balcony paving	1,950	sf	7 00	13,650
		2'-6"x2'-6" Precast concrete paver	6,830	sf	18 00	122,940
		Walking surface	1,547	sf	10 00	15,470
		Flashing and miscellaneous sheet metal	30,380	sf	4 00	121,520
		Scupper	3	ea	300 00	900
		Rain water leader	35	lf	20 00	700
		Seismic joint			with Connector	
		Galvanized metal grate crossover bndge, 3' wide	94	lf	200 00	18,800
		Metal catwalk	345	sf	60 00	20,700
		Roof ladder	2	ea	3000 00	6,000
		Roof hatch, 4x4	3	ea	1200 00	3,600
		Window washing davit pedestal, install only	70	ea	800 00	56,000
		Miscellaneous pipe and duct support	1	ls	46000 00	46,000
		ROOF COVERINGS				889,760

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B3020		ROOF OPENINGS				
		Roof opening for mech equipment (allow)	30	ea	1000.00	30,000
		Roof opening for soiled linen chute vent stack	1	ea	1000.00	1,000
		Roof opening roof hatch	3	ea	1500.00	4,500
		ROOF OPENINGS				35,500
C1010		PARTITIONS				
		Partition, metal stud, drywall both sides	49,443	SF	30.00	1,483,290
		Partition, metal stud, drywall both sides, acoustic insulation	188,488	SF	31.00	5,843,128
		Partition, one hour rated, metal stud, drywall both sides	21,482	SF	33.00	708,919
		Partition, one hour rated, metal stud, drywall both sides, acoustic insulation	85,658	SF	33.00	2,826,701
		Partition, two hour rated, metal stud, drywall both sides	3,234	SF	33.00	106,722
		Partition, two hour rated, metal stud, drywall both sides, acoustic insulation	12,124	SF	33.00	400,092
		Premium for duct liner	77,851	SF	2.00	155,702
		Column covers	1	LS	225555.00	225,555
		Fire stopping and special features	203,385	SF	1.35	274,570
		PARTITIONS				12,024,679

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage SF GB		
Elem.	Div.	Description	Quantity	U o.M.	Unit Cost	Total
C1020		INTERIOR DOORS				
		Metal door, single, 3'0" x 7'0"	135	EA	2400 00	324 000
		Metal door, single, 3'4" x 7'0"	14	EA	2400 00	33 600
		Metal door, single, 4'0" x 7'0"	283	EA	2400 00	679,200
		Metal door, double, 6'0" x 7'0"	7	EA	4500 00	31 500
		Metal door, double, 7'6" x 7'0"	63	EA	5000 00	315 000
		Metal door, glazed panel, single, 3'0" x 7'0"	14	EA	2700 00	37 800
		Metal door, glazed panel, single, 4'0" x 7'0"	21	EA	2800 00	58 800
		Metal door, half glazed, single, 3'0" x 7'0"	14	EA	2800 00	39 200
		Metal sliding door, 4'4" x 7'0"	420	EA	2900 00	1,218 000
		Metal bi-folding door, 8'0" x 7'0"	7	EA	5000 00	35 000
		Aluminum door, single, 3'0" x 7'0"	7	EA	2700 00	18 900
		Aluminum door, single, 4'0" x 7'0"	7	EA	2700 00	18 900
		Aluminum door, double, 6'0" x 7'0"	14	EA	5000 00	70 000
		Access doors, allow	1	LS	60000 00	60 000
		Premium for 20 min rating	231	EA	40 00	9 240
		Premium for 45 min rating	140	EA	50 00	7 000
		Premium for 60 min rating	126	EA	100 00	12 600
		Premium for 90 min rating	56	EA	120 00	6 720
		Interior glazing	3,187	SF	60 00	191 220
		Fire-rated glazing	63	SF	200 00	12 600
		Allowance for special hardware and other special features	203,385	SF	0 40	81,354
		INTERIOR DOORS				3 260 634

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C1030		SPECIALTIES				
		Misc Specialties(169 Bathroom)	203,385	SF	9.00	1,830,465
		Towel dispenser/disposal (install only)		EA	100.00	
		Toilet paper dispenser		EA	80.00	
		Seat cover dispenser		EA	20.00	
		Toilet grab bars (fold down)		EA	800.00	
		Shower grab bars		EA	175.00	
		Soap dispenser		EA	100.00	
		Tampon dispenser		EA	550.00	
		Tampon disposal		EA	200.00	
		Shower track and curtain		EA	200.00	
		Robe hooks		EA	50.00	
		Mirror		EA	350.00	
		Base casework unit		LF	450.00	
		Wall casework unit		LF	350.00	
		Storage unit with drawers		LF	500.00	
		Shelving		LF	250.00	
		Markerboard		EA	800.00	
		Locker		EA	350.00	
		Nurse station		LF	860.00	
		Curtain rail		LF	35.00	
		Phone shelf	43	LF	200.00	8,600
		Firestopping	203,385	SF	0.20	40,677
		Signage				
		Floor directory 14" x 15 1/2", wood	8	EA	700.00	5,600
		68" x 10" acrylic in wood frame	32	EA	1000.00	32,000
		Directional/wall 14" x 15 1/2", wood	16	EA	700.00	11,200
		Residence wing directional sign	32	EA	600.00	19,200
		Stair/restroom/etc. 7 1/4" x 6 3/8", wood	124	EA	200.00	24,800
		Vinyl copy on glass	3	EA	200.00	600
		Door jamb identification, 3" x 1", acrylic	1,137	EA	40.00	45,480
		Accessible Building entrance ID, 5" x 5", acrylic	3	EA	85.00	255
		Unisex restroom door symbol, 12" dia., acrylic	56	EA	225.00	12,600
		Emergency evacuation map, 14" x 16 1/2", acrylic	40	EA	700.00	28,000
		Firefighter's stairwell information, 10" x 13", acrylic	32	EA	225.00	7,200
		Maximum occupancy notice, 9" x 9", acrylic	40	EA	150.00	6,000
		Biohazard warning, 6 3/8" x 6 3/8", acrylic	9	EA	150.00	1,350
		No Smoking symbol	3	EA	130.00	390
		Folding partition	1,244	SF	75.00	93,266
		Fire extinguishers	203,385	SF	0.15	30,508
		Miscellaneous metalwork	203,385	SF	4.00	813,540
		Miscellaneous carpentry	203,385	SF	1.00	203,385
		Miscellaneous specialties	203,385	SF	1.00	203,385
		SPECIALTIES				3,418,501

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C3010		WALL FINISHES				
		Paint to walls	403,864	SF	1 15	464 444
		Ceramic wall tiles	76,437	SF	18 00	1 375 866
		MDC wall covering at door opes	3,331	SF	50 00	166 550
		Wall corner guards	10,500	LF	18 00	189 000
		Bumper guards	10,200	LF	35 00	357 000
		Handrail	9,000	LF	40 00	360,000
		Acrovyn wainscot- Reduced QTY	5,000	SF	18 00	90,000
		WALL FINISHES				3 002 850
C3020		FLOOR FINISHES				
		Carpet	15,563	SF	5 50	85,597
		Floor sealer	15,634	SF	1 50	23,451
		Vinyl composition tiles	2,872	SF	4 00	11 488
		Ceramic floor tiles	20,389	SF	18 00	367,002
		Sheet vinyl flooring	91,798	SF	9 00	826,182
		Linoleum	57,129	SF	10 00	571,290
		Vapor control membrane	110,233	SF	3 50	385,816
		Resilient base	43,316	LF	3 00	129,948
		Ceramic tile base	8,729	LF	18 00	157,122
		Vinyl coved base	5,159	LF	8 00	41,272
		Special floor finishes	203,385	SF	0 25	50,846
		FLOOR FINISHES				2 650,014
C3030		CEILING FINISHES				
		Paint structural soffit	11,196	SF	1 80	20,153
		Accoustic ceiling tiles	125,231	SF	7 00	876,617
		Accoustic ceiling tiles, tegular	259	SF	8 00	2,072
		Suspended drywall ceiling, paint	66,699	SF	17 00	1 133,883
		Allowance for bulkheads, and other special ceiling features	202,668	SF	0 70	141,868
		CEILING FINISHES				2 174,593
D1010		ELEVATORS & LIFTS				
		Elevator, 5000 lb, 7 stops	3	EA	450000 00	1,350,000
		ELEVATORS & LIFTS				1,350,000

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
D1520		PLUMBING Sanitary fixtures, including rough-in connection pipework Residential units Waterclosets Lavatory Shower Kitchen sink Metering, digital and remote reading Fixtures allowance for other areas Condensate drainage Floor drains, hosebibbs, cleanouts, etc Grease interceptor, 1500 gallons Kitchen equipment connections Gas distribution Testing and sterilization Backflow preventer, makeup water and metering for irrigation and landscaping Firestopping/core drilling/seismic bracing Fuel oil distribution Roof drainage Commissioning assistance	203,385	SF	38.00	7,728,630
		PLUMBING				7,728,630
D1530		HVAC Heating, ventilation and air conditioning Air cooled chiller, pumps, hydronic piping, rooftop air handling units, (4) exhaust fans, VAV boxes, DDC controls, testing and balancing Central Toilet and Laundry exhaust system Kitchen grease hood and ductwork Mechanical/electrical room ventilation Isolation room - HEPA filtered Centralized DDC Controls - included Commissioning assistance Firestopping/core drilling/seismic bracing	203,385	SF	50.00	10,169,250
		HVAC				10,169,250

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M	Unit Cost	Total
D1540		FIRE PROTECTION Automatic wet pipe sprinkler & combination standpipe system to bldg	203,385	SF	9 00	1 830 465
		FIRE PROTECTION				
D5010		ELECTRICAL DISTRIBUTION Main normal power and distribution Emergency power distribution Machine and equipment power connections Commissioning assistance Firestopping/core drilling/seismic bracing	203,385	SF	16 00	3 254 160
		ELECTRICAL DISTRIBUTION				
D5020		LIGHTING & BRANCH WIRING Lighting fixtures and switches, including conduit and wire Grounding and power specialties User convenience power	203,385	SF	14 00	2 847 390
		LIGHTING & BRANCH WIRING				

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
D5040		SPECIAL ELECTRICAL SYSTEMS Telephone/data MDF/IDF and backboards and backbone Telephone/data outlets, box and conduit only Telephone/data cabling Wireless Elderly Emergency Call system Paging, public address system, empty conduit only CATV, including conduit and cable Audio/visual, conduit only Fire alarm system Security system, Access control and instrusion detection CCTV Cabling	203,385	SF	25.00	5,084,625
		SPECIAL ELECTRICAL SYSTEMS				5,084,625
E1059		MISCELLANEOUS EQUIPMENT Window washing Window washing platforms Laundry chute Food service at galley Supply and Install: Bathtub with powered lift Ceiling lift system Appliances Warming cabinet, 1-compartment Undercounter refrigerator Install only: Waste disposal unit Supply station, single auxiliary Supply station, double main Command solution center Diagnostic set, wall mount Main Kitchen reheat Laundry domestic	1 150 7 14 14 169 1 1	LS LF EXCL EA EA EA NA NA NA NA NA NA NA NA EA EA	75000.00 1000.00 7500.00 7500.00 20000.00 10000.00 3500.00 10000.00 700.00 50.00 600.00 1000.00 200.00 250.00 50000.00 25000.00	75,000 150,000 52,500 280,000 140,000 591,500 25,000 50,000
		MISCELLANEOUS EQUIPMENT				1,364,000

		LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION C CLAR WEST (OSHPD)		Estimate Stage: Floor Area: Prepared by:	Concept Stage: SF GB	
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
E2010		FIXED FURNISHINGS				
		Window blinds	350	SF	9 00	3 150
		Motorized mecho shades	1,380	SF	45 00	62 100
		FIXED FURNISHINGS				65 250
F1034		OTHER SPECIAL CONSTRUCTION				
		Computer room	1	LS	5000 00	5 000
		ADHC	1	LS	50000 00	50 000
		CDC	1	LS	50000 00	50 000
		Isolation room	1	LS	5000 00	5 000
		OTHER SPECIAL CONSTRUCTION				110 000
G10		SITE PREPARATION				
			1	LS	250000 00	250 000
		SITE PREPARATION				250 000
G20		SITE IMPROVEMENT				
			1	LS	2500000 00	2 500 000
		SITE IMPROVEMENT				2 500 000
G30		SITE/MECHANICAL UTILITIES				
			1	LS	400000 00	400.000
		SITE/MECHANICAL UTILITIES				400.000
G40		SITE ELECTRICAL UTILITIES				
			1	LS	250000 00	250.000
		SITE ELECTRICAL UTILITIES				250 000
G50		OTHER SITE CONSTRUCTION				
		OTHER SITE CONSTRUCTION				

Appendix

Cost Estimate Tabulations

OPTION D



Option D		Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB	
El.	Section	Totals		Costs/SF
	UNIFORMAT SUMMARY			
A	SUBSTRUCTURE			
A10	FOUNDATIONS	\$3,371,056	\$3,371,056	\$16.57
A20	BASEMENT CONSTRUCTION	\$0		
B	SHELL			
B10	SUPERSTRUCTURE	\$11,718,087	\$24,181,524	\$118.90
B20	EXTERIOR CLOSURE	\$11,568,557	\$57.62	\$56.88
B30	ROOFING	\$894,880	\$4.40	
C	INTERIORS			
C10	INTERIOR CONSTRUCTION	\$10,552,471	\$51.88	\$90.37
C30	INTERIOR FINISHES	\$7,827,467	\$38.49	
D	SERVICES			
D10	CONVEYING SYSTEMS	\$1,200,000	\$5.90	
D15	MECHANICAL	\$15,864,030	\$78.00	
D50	ELECTRICAL	\$9,154,359	\$45.01	
E	EQUIPMENT & FURNISHING			
E10	EQUIPMENT	\$1,465,500	\$7.21	\$7.53
E20	FURNISHINGS	\$65,250	\$0.32	
F	SPECIAL CONSTRUCTION/DEMOLITION			
F10	SPECIAL CONSTRUCTION	\$115,500	\$115.500	0.57
F20	SELECTIVE BUILDING DEMOLITION	\$0		
BUILDING COST		\$73,797,157		\$362.84
G	BUILDING SITWORK			
G10	SITE PREPARATION	\$250,000	\$3,400,000	16.72
G20	SITE IMPROVEMENT	\$2,500,000		12.29
G30	SITE/MECHANICAL UTILITIES	\$400,000		1.97
G40	SITE ELECTRICAL UTILITIES	\$250,000		1.23
G50	OTHER SITE CONSTRUCTION	\$0		
TOTAL DIRECT COSTS		\$77,197,157		\$379.56
GENERAL CONDITIONS, OH & P		15.00%	\$11,579,574	\$56.93
BOND		1.00%	\$887,767	\$4.36
DESIGN CONTINGENCY		15.00%	\$13,449,675	\$66.13
ESTIMATE TOTAL			\$103,114,173	\$506.99

Appendix

Cost Estimate Tabulations

Option D		0 Estimate Stage: 0 Floor Area: Prepared by:	Concept Stage 203385 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
	DETAILED SUMMARY				
A10	FOUNDATIONS				
A1010	FOUNDATIONS	203,385	GFA	\$2.37	\$482,937
A1020	SPECIAL FOUNDATIONS	203,385	GFA	\$11.11	\$2,258,892
A1030	SLAB ON GRADE	203,385	GFA	\$3.09	\$629,227
	FOUNDATIONS				\$3,371,056
B10	SUPERSTRUCTURE				
B1010	FLOOR CONSTRUCTION	203,385	GFA	\$47.09	\$9,577,187
B1020	ROOF CONSTRUCTION	203,385	GFA	\$6.72	\$1,365,900
B1030	STAIR CONSTRUCTION	203,385	GFA	\$3.81	\$775,000
	SUPERSTRUCTURE				\$11,718,087
B20	EXTERIOR CLOSURE				
B2010	EXTERIOR WALLS	203,385	GFA	\$42.93	\$8,731,794
B2020	EXTERIOR WINDOWS	203,385	GFA	\$13.14	\$2,671,513
B2030	EXTERIOR DOORS	203,385	GFA	\$0.81	\$165,250
	EXTERIOR CLOSURE				\$11,568,557
B30	ROOFING				
B3010	ROOF COVERINGS	203,385	GFA	\$4.23	\$859,380
B3020	ROOF OPENINGS	203,385	GFA	\$0.17	\$35,500
	ROOFING				\$894,880
C10	INTERIOR CONSTRUCTION				
C1010	PARTITIONS	203,385	GFA	\$30.58	\$6,218,737
C1020	INTERIOR DOORS	203,385	GFA	\$9.00	\$1,830,465
C1030	SPECIALTIES	203,385	GFA	\$12.31	\$2,503,269
	INTERIOR CONSTRUCTION				\$10,552,471
C30	INTERIOR FINISHES				
C3010	WALL FINISHES	203,385	GFA	\$14.76	\$3,002,860
C3020	FLOOR FINISHES	203,385	GFA	\$13.03	\$2,650,014
C3030	CEILING FINISHES	203,385	GFA	\$10.69	\$2,174,593
	INTERIOR FINISHES				\$7,827,467

Option D		0 Estimate Stage: 0 Floor Area: Prepared by:	Concept Stage 203385 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
D10	CONVEYING SYSTEMS				
D1010	ELEVATORS & LIFTS	203,385	GFA	\$5.90	\$1,200,000
	CONVEYING SYSTEMS				\$1,200,000
D15	MECHANICAL				
D1520	PLUMBING	203,385	GFA	\$30.00	\$6,101,550
D1530	HVAC	203,385	GFA	\$39.00	\$7,932,015
D1540	FIRE PROTECTION	203,385	GFA	\$9.00	\$1,830,465
	MECHANICAL				\$15,864,030
D50	ELECTRICAL				
D5010	ELECTRICAL DISTRIBUTION	203,385	GFA	\$13.07	\$2,658,242
D5020	LIGHTING & BRANCH WIRING	203,385	GFA	\$11.50	\$2,338,928
D5040	SPECIAL ELECTRICAL SYSTEMS	203,385	GFA	\$20.44	\$4,157,189
	ELECTRICAL				\$9,154,359
E10	EQUIPMENT				
E1059	MISCELLANEOUS EQUIPMENT	203,385	GFA	\$7.21	\$1,465,500
	EQUIPMENT				\$1,465,500
E20	FURNISHINGS				
E2010	FIXED FURNISHINGS	203,385	GFA	\$0.32	\$65,250
E2020	MOVABLE FURNISHINGS	203,385	GFA	0.00	\$0
	FURNISHINGS				\$65,250
F10	SPECIAL CONSTRUCTION				
F1034	OTHER SPECIAL CONSTRUCTION	203,385	GFA	0.57	\$115,500
	SPECIAL CONSTRUCTION				\$115,500
F20	SELECTIVE BUILDING DEMOLITION				
F2010	BUILDING DEMOLITION	203,385	GFA	0.00	\$0
F2020	HAZARDOUS COMPONENTS ABATEMENT	203,385	GFA	0.00	\$0
	SELECTIVE BUILDING DEMOLITION				\$0

Appendix

Cost Estimate Tabulations

Option D		0 Estimate Stage: 0 Floor Area: Prepared by:	Concept Stage 203385 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
G	BUILDING SITE WORK				
	G10 SITE PREPARATION	203,385	GFA	1.23	\$250,000
	G20 SITE IMPROVEMENT	203,385	GFA	12.29	\$2,500,000
	G30 SITE/MECHANICAL UTILITIES	203,385	GFA	1.97	\$400,000
	G40 SITE ELECTRICAL UTILITIES	203,385	GFA	1.23	\$250,000
	G50 OTHER SITE CONSTRUCTION	203,385	GFA	0.00	\$0
	BUILDING SITE WORK				\$3,400,000
	TOTAL DIRECT COSTS				\$77,197,157
	GENERAL CONDITIONS, OVERHEAD & PROFIT BOND	15.00% 1.00%			\$11,579,574 \$887,767
	Sub-Total				\$89,664,498
	DESIGN CONTINGENCY	15.00%			\$13,449,675
	ESTIMATE TOTAL				\$103,114,173

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
A1010		FOUNDATIONS				
		Wall footing/Grade beam:				
		Excavation and off haul/backfill	202	cy	45 00	9 090
		Form top edge	2,123	lf	14 00	29 722
		Concrete material 5 kpi	202	cy	320 00	64 663
		Concrete placing	202	cy		
		Rebar	38,091	lb	1 15	43 805
		Spread footing:				
		Excavation and off haul/backfill	323	cy	45 00	14 535
		Form top edge	1,428	lf	14 00	19 992
		Concrete material 5 kpi	323	cy	320 00	103,360
		Concrete placing	323	cy		
		Rebar	32,391	lb	1 15	37 250
		Mechanical coupler	408	ea	40 00	16,320
		Set anchor bolts	103	set	1000 00	103,000
		Grout base plates	103	ea	400 00	41 200
		FOUNDATIONS				482 937
A1020		SPECIAL FOUNDATIONS				
		Pile cap/mat footing:				
		Excavation and off haul	981	cy	45 00	44 145
		Form top edge	1,445	lf	15 00	21 675
		Concrete material 5 kpi	981	cy	320 00	314 071
		Concrete placing	981	cy		
		Rebar	230,001	lb	1 15	264 501
		Micropiles 7-5/8" dia pipe with 12" dia grout				
		Mobilization/demobilization	1	ls	25000 00	25.000
		Pre-production test	1	ls	15000 00	15.000
		Tension proof test, 5% of total	13	ea	4000 00	52 000
		Disposal of drill spoil & grout spoil	702	cy	25 00	17,550
		Compressive waterproof filler at top	250	ea	75 00	18,750
		P1: Vertical 20' bond length, 15' unbond	20	ea	4000 00	80,000
		P2: Vertical 35' bond length & 15' unbond	6	ea	4500 00	27 000
		P3: Raked 35' bond length & 15' unbond	216	ea	6200 00	1 339,200
		P4: raked 20' bond length., 15' unbond	8	ea	5000 00	40,000
		SPECIAL FOUNDATIONS				2 258 892

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
A1030		SLAB ON GRADE				
		Aggregated base, 6" thick	540	cy	55.00	29,700
		Vapor barrier	29,176	sf	0.45	13,129
		Slab on grade				
		Concrete material 3500 psi	581	cy	300.00	174,300
		Concrete placing	581	cy		
		Rebar	112,380	lb	1.15	129,237
		Misc. formwork	29,747	sf	3.00	89,241
		Concrete finishes	29,176	sf	1.35	39,388
		Thickening @ grade beams, spread footings & pile caps	256	cy	400.00	102,400
		Elevator pit 10'x10'x4' D	1	ea	18000.00	18,000
		Elevator pit 20'x11'x4' D	1	ea	25000.00	25,000
		Waterproofing for elevator pits	736	sf	12.00	8,832
		SLAB ON GRADE				629,227
B1010		FLOOR CONSTRUCTION				
		Structural steel	1,800	ton	3500.00	6,300,000
		Premium for exposed-to-view canopy framing, AEES	2,275	sf	28.00	63,700
		Steel deck				
		Type 1: 20 gax3"	138,178	sf	4.75	656,345
		Type 2: 20 gax2"	20,579	sf	4.75	97,750
		Type 3: 18 gaX3"	12,830	sf	4.75	60,943
		Light Wt. concrete fill				
		Type 1: 3-1/4" thick with #4 @ 12" ew	138,178	sf	8.00	1,105,423
		Type 2: 2-1/2" Min. with #4 @ 12" ew	20,579	sf	8.00	164,632
		Type 3: 3-1/4" Max with #4 @ 12" ew	12,830	sf	8.00	102,641
		Added rebar	117,909	lb	1.15	135,596
		Formwork for depressed slab	4,915	lf	8.00	39,320
		1/4" x2' wide x 6" H edge folder plate form , curved @ terrace	192	lf	300.00	57,600
		Fireproofing steel frame	1,800	ton	350.00	630,000
		Fireproofing deck (@ type 2 deck only)	20,579	sf	3.00	61,737
		Seismic joint @ floor and slab		with Connector		
		Misc. concrete	203,000	gsf	0.50	101,500
		FLOOR CONSTRUCTION				9,577,187

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B1020		ROOF CONSTRUCTION				
		Structural framing	200	ton	3500 00	700,000
		Steel deck				
		Type 1: 20 gax3"	29,368	sf	4 75	139,498
		Type 5: 18 gax3"	2,365	sf	4 75	11,234
		Light Wt. concrete fill				
		Type 1: 3-1/4" thick with #4 @ 12" ew	29,368	sf	9 00	264,312
		Type 5: no concrete topping				
		Added rebar	29,635	None	1 15	34,081
		1-1/2" Rod bracing	610	lb	50 00	30,500
		1/4" x2' wide x 6" H edge folder plate form , curved @ terrace	32	lf	300 00	9,600
		Premium for detailing @ davit	70	ea	500 00	35,000
		Fireproofing steel frame	200	ton	350 00	70,000
		18" House-keeping pads for HVAC on roof	2,867	sf	25 00	71,675
		ROOF CONSTRUCTION				1,365,900
B1030		STAIR CONSTRUCTION				
		Stair structure	25.5	ft	18000 00	459,000
		Stair railing	25.5	ft	12000.00	306,000
		Stair/rail to elevator machine room	1	ea	10000 00	10,000
		STAIR CONSTRUCTION				775,000

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B2010		EXTERIOR WALLS				
		Metal stud framing (Stud thickness):				
		6"	95,227	sf	12.00	1,142,724
		4" & 6"	4,124	sf	18.00	74,232
		6" & 6"	7,773	sf	20.00	155,460
		5/8" Exterior gypsum sheathing	113,259	sf	4.00	453,037
		5/8" gypsum sheathing @ inside face of exterior wall	70,548	sf	5.00	352,740
		Exterior wall insulation	98,982	sf	1.50	148,473
		Mechanical screen wall (sheathing and framing)	4,047	sf	35.00	141,645
		Cement plaster finish, with integral color	104,844	sf	20.00	2,096,880
		Venetian plaster	23,112	sf	40.00	924,480
		Scratch & brown coats @ Venetian plaster	23,112	sf	13.00	300,456
		Mock up for Venetian plaster	1	ls	6000.00	6,000
		Plaster ceiling @ terrace soffit	2,275	sf	40.00	91,000
		Corrugated metal siding @ backside of parapet and screen wall	6,118	sf	25.00	152,950
		6"x1-2" Steel tube for Living Room Tower wall cap	132	lf	500.00	66,000
		6"x6" Steel tube for Living Room Tower wall cap	132	lf	250.00	33,000
		8"x8" Steel tube for mechanical screen wall cap	359	lf	300.00	107,700
		Metal stud wall cap for parapet wall	1,256	lf	35.00	43,960
		Painted metal coping @ Living Room Tower parapet wall, 1'-6" wide	132	lf	70.00	9,240
		Painted metal coping @ mechanical screen wall, 10" wide	359	lf	50.00	17,950
		Painted metal coping @ high parapet , 9" wide	63	lf	50.00	3,150
		Painted metal coping @ parapet wall, 8" wide	1,256	lf	50.00	62,800
		Base flashing	2,156	lf	20.00	43,120
		16 ga. Brake-formed window support surround weld to studs	15,957	lf	40.00	638,280
		3" Aluminum reveal	604	lf	42.00	25,368
		3/4" Aluminum reveal	12,445	lf	10.00	124,450
		5"x1-6" Aluminum wall louver	1	ea	800.00	800
		3'x3' Aluminum wall louver	3	ea	700.00	2,100
		2'-6"x2'6" Openable panel	2	ea	700.00	1,400
		Terrace steel guardrail, 3' H	270	lf	550.00	148,500
		Parapet wall railing	937	lf	300.00	281,100
		Seismic joint @ wall		with Connector		
		Extruded alum fin, 8" wide x 4' long, with alum end plates and SS wires for pigeon control	18	ea	500.00	9,000
		Closure cap @ window sill	69	lf	300.00	20,700
		Scaffolding	127,956	sf	5.00	639,780
		Paint inside	70,548	sf	1.00	70,548
		Paint steel tube column	352	lf	15.00	5,280
		Paint parapet wall railing	937	lf	3.00	2,811
		Paint balcony/terrace guardrail	270	lf	8.00	2,160
		Paint aluminum reveal	13,049	lf	2.00	26,098
		Paint miscellaneous	1	ls	17000.00	17,000
		Paint exterior cement plaster		with cement plaster		

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage:	Concept Stage		
			Floor Area:	203,385 SF		
			Prepared by:	GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
		Firesafing @ floors	8,124	lf	10 00	81,240
		Firesafing @ roof	1,354	lf	12 00	16,248
		Caulking and sealant	127,956	sf	1 50	191,934
		EXTERIOR WALLS				8731,794

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B2020		EXTERIOR WINDOWS				
		Operable window w/ insulated glazing & alum frame:				
		Type A1 - 3'-0"x6'	220	ea	1756.00	386,320
		Operable window w/ laminated safety glass with heat strengthened glass on the inside light and tempered glass on the outside light and alum frame (West Residence Only per A8.29):				
		Type A1 - 3'-0"x6'	55	ea	2195.00	120,725
		Type A2 - 4'x7'	72	ea	3190.00	229,680
		Type A3 - 2'-9"x6'	10	ea	1857.50	18,575
		Type A4 - 2'-9"x7'	8	ea	2167.50	17,340
		Type A5 - 3'x7'	40	ea	2362.50	94,500
		Premium for operable windows	405	ea	1125.00	455,625
		Fixed window w/ insulated glazing & alum frame:				
		Type B1 - 4'-10"x7'-2"	30	ea	3118.00	93,540
		Type B2 - 4'-10"x8'-2"	12	ea	3552.00	42,624
		Type B3 - 3'-9"x7'-2"	20	ea	2420.00	48,400
		Type B4 - 3'-9"x8'-2"	6	ea	2758.00	16,548
		Type B5 - 4-4"x7'-2"	20	ea	2796.00	55,920
		Type B6 - 4'-4"x8'-2"	6	ea	3184.00	19,104
		Type B7 - 4'x8'-2"	2	ea	2942.00	5,884
		Type D1 - 3'-6"x10'-4"	60	ea	3254.00	195,240
		Type D2 - 3'-6"x11'-10"	12	ea	3724.00	44,688
		Type D3 - 3'-6"x11'-2"	12	ea	3520.00	42,240
		Type D4 - 3'-2"x10'-4"	45	ea	2948.00	132,660
		Type D5 - 3'-2"x11'-10"	9	ea	3374.00	30,366
		Type D6 - 3'-2"x11'-2"	9	ea	3188.00	28,692
		Type D7 - 3'-0"x7'-8"	6	ea	1900.00	11,400
		Type D8 - 17'x7'-8"	1	ea	11736.00	11,736
		Type D9 - 11'-6"x7'-8"	1	ea	7940.00	7,940
		Type D10 - 17'x10'-4"	4	ea	15806.00	63,224
		Type D11 - 11'-6"x10'-4"	4	ea	10692.00	42,768
		Type D12 - 17'x11'-10"	1	ea	18100.00	18,100
		Type D13 - 1'-6"x11'-10"	1	ea	1598.00	1,598
		Type D14 - 17'x11'-2"	1	ea	17092.00	17,092
		Type D15 - 11'-6"x11'-2"	1	ea	11562.00	11,562
		Type D16 - 3'x6'-6"	2	ea	1756.00	3,512
		Type E1 - 5'x7'-2"	10	ea	3228.00	32,280
		Type E2 - 5'x8'-2"	4	ea	3678.00	14,712
		Type F - 2'x2'	25	ea	360.00	9,000
		Type G - 4'x4'	7	ea	1440.00	10,080
		Type H1 - 3'x4'-6"	10	ea	1216.00	12,160
		Type H2 - 3'x5'	2	ea	1350.00	2,700
		Type H3 - 2'-9"x7'-8"	1	ea	1900.00	1,900
		Type J1 - 10'x4'-6"	5	ea	4050.00	20,250
		Type J2 - 10'x5'	2	ea	4500.00	9,000
		Premium for blind	17548	sf	7.00	122,836
		Fixed tempered glass panel @ Balcony	1232	sf	56.00	68,992
		Mock up & testing	1	ls	100000.00	100,000
		EXTERIOR WINDOWS				2,671,513

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage:	Concept Stage
			Floor Area:	203,385 SF
			Prepared by:	GB
Elem.	Div.	Description	Quantity	U.o.M.
				Unit Cost
				Total
B2030		EXTERIOR DOORS		
		HM frame/door/hardware		
		3'x7'	13	lv
		4'x7'	6	lv
		4'-8"x7'	2	lv
		Aluminum frame/door/hardware		
		(2) 3'-8"x7'	3	pr
		3'x7'	1	lv
		3'x7'-4"	10	lv
		3'x8'-4"	4	lv
		4'x7'-4"	5	lv
		4'x8'-4"	3	lv
		Add for automatic door operator for entry door	3	ea
		Power assist device	17	ea
		EXTERIOR DOORS		
				165 250

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B3010	ROOF COVERINGS					
		Roofing system, single ply membrane & insulation and surface coating	30,380	sf	13.00	394,940
		Galvanized sheet metal roofing	102	sf	30.00	3,060
		Terrace/balcony paving	1,950	sf	18.00	35,100
		Waterproofing for terrace/balcony paving	1,950	sf	7.00	13,650
		2'-6"x2'-6" Precast concrete paver	6,830	sf	18.00	122,940
		Walking surface	1,547	sf	10.00	15,470
		Flashing and miscellaneous sheet metal	30,380	sf	4.00	121,520
		Scupper	3	ea	300.00	900
		Rain water leader	35	lf	20.00	700
		Seismic joint		with Connector		
		Galvanized metal grate crossover bridge, 3' wide	94	lf	200.00	18,800
		Metal catwalk	345	sf	60.00	20,700
		Roof ladder	2	ea	3000.00	6,000
		Roof hatch, 4x4	3	ea	1200.00	3,600
		Window washing davit pedestal, install only	70	ea	800.00	56,000
		Miscellaneous pipe and duct support	1	ls	46000.00	46,000
	ROOF COVERINGS					859,380
B3020	ROOF OPENINGS					
		Roof opening for mech equipment (allow)	30	ea	1000.00	30,000
		Roof opening for soiled linen chute vent stack	1	ea	1000.00	1,000
		Roof opening roof hatch	3	ea	1500.00	4,500
	ROOF OPENINGS					35,500

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C1010		PARTITIONS				
		Partition, metal stud, drywall both sides	49,443	SF	15 00	741 645
		Partition, metal stud, drywall both sides, acoustic insulation	188,488	SF	16 00	3,015,808
		Partition, one hour rated, metal stud, drywall both sides	21,482	SF	18 00	386,683
		Partition, one hour rated, metal stud, drywall both sides, acoustic insulation	85,658	SF	16 00	1,370,522
		Partition, two hour rated, metal stud, drywall both sides	3,234	SF	18 00	58,212
		Partition, two hour rated, metal stud, drywall both sides, acoustic insulation	12,124	SF	20 00	242,480
		Premium for duct liner	1	SF	1 50	2
		Column covers	1	LS	200000 00	200,000
		Fire stopping and special features	203,385	SF	1 00	203,385
		PARTITIONS				6,218,737
C1020		INTERIOR DOORS				
		Doors complete	203,385	SF	9 00	1,830,465
		Metal door, single, 3'0" x 7'0"		EA	2400 00	
		Metal door, single, 3'4" x 7'0"		EA	2400 00	
		Metal door, single, 4'0" x 7'0"		EA	2400 00	
		Metal door, double, 6'0" x 7'0"		EA	4500 00	
		Metal door, double, 7'6" x 7'0"		EA	5000 00	
		Metal door, glazed panel, single, 3'0" x 7'0"		EA	2700 00	
		Metal door, glazed panel, single, 4'0" x 7'0"		EA	2800 00	
		Metal door, half glazed, single, 3'0" x 7'0"		EA	2800 00	
		Metal sliding door, 4'4" x 7'0"		EA	2900 00	
		Metal bi-folding door, 8'0" x 7'0"		EA	5000 00	
		Aluminum door, single, 3'0" x 7'0"		EA	2700 00	
		Aluminum door, single, 4'0" x 7'0"		EA	2700 00	
		Aluminum door, double, 6'0" x 7'0"		EA	5000 00	
		Access doors, allow		LS	60000 00	
		Premium for 20 min rating		EA	40 00	
		Premium for 45 min rating		EA	50 00	
		Premium for 60 min rating		EA	100 00	
		Premium for 90 min rating		EA	120 00	
		Interior glazing		SF	60 00	
		Fire-rated glazing		SF	200 00	
		Allowance for special hardware and other special features		SF	0 40	
		INTERIOR DOORS				1,830,465

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C1030		SPECIALTIES				
		The cover scope below	203,385	SF	8.00	1,627,080
		Towel dispenser/disposal (install only)		EA	100.00	
		Toilet paper dispenser		EA	80.00	
		Seat cover dispenser		EA	20.00	
		Toilet grab bars (fold down)		EA	800.00	
		Shower grab bars		EA	175.00	
		Soap dispenser		EA	100.00	
		Tampon dispenser		EA	550.00	
		Tampon disposal		EA	200.00	
		Shower track and curtain		EA	200.00	
		Robe hooks		EA	50.00	
		Mirror		EA	350.00	
		Base casework unit		LF	450.00	
		Wall casework unit		LF	350.00	
		Storage unit with drawers		LF	500.00	
		Shelving		LF	250.00	
		Markerboard		EA	800.00	
		Locker		EA	350.00	
		Nurse station		LF	860.00	
		Curtain rail		LF	35.00	
		Phone shelf	43	LF	200.00	8,600
		Firestopping	203,385	SF	0.20	40,677
		Signage				
		Floor directory 14" x 15 1/2", wood	8	EA	700.00	5,600
		6'8" x 10" acrylic in wood frame	32	EA	1000.00	32,000
		Directional/wall 14" x 15 1/2", wood	16	EA	700.00	11,200
		Residence wing directional sign	32	EA	600.00	19,200
		Stair/restroom/etc. 7 1/4" x 6 3/8", wood	124	EA	200.00	24,800
		Vinyl copy on glass	3	EA	200.00	600
		Door jamb identification, 3" x 1", acrylic	1,137	EA	40.00	45,480
		Accessible Building entrance ID, 5" x 5", acrylic	3	EA	85.00	255
		Unisex restroom door symbol, 12" dia., acrylic	56	EA	225.00	12,600
		Emergency evacuation map, 14" x 16 1/2", acrylic	40	EA	700.00	28,000
		Firefighter's stairwell information, 10" x 13", acrylic	32	EA	225.00	7,200
		Maximum occupancy notice, 9" x 9", acrylic	40	EA	150.00	6,000
		Biohazard warning, 6 3/8" x 6 3/8", acrylic	9	EA	150.00	1,350
		No Smoking symbol	3	EA	130.00	390
		Folding partition	1,244	SF	75.00	93,266
		Fire extinguishers	203,385	SF	0.15	30,508
		Miscellaneous metalwork	203,385	SF	1.00	203,385
		Miscellaneous carpentry	203,385	SF	1.00	203,385
		Miscellaneous specialties	203,385	SF	0.50	101,693
		SPECIALTIES				2,503,269

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C3010		WALL FINISHES				
		Paint to walls	403,864	SF	1 15	464 444
		Ceramic wall tiles	76,437	SF	18 00	1,375 866
		MDC wall covering at door opes	3,331	SF	50 00	166 550
		Wall corner guards	10,500	LF	18 00	189,000
		Bumper guards	10,200	LF	35 00	357,000
		Handrail	9,000	LF	40 00	360,000
		Acrovyn wainscot	5,000	SF	18 00	90,000
		WALL FINISHES				3,002 860
C3020		FLOOR FINISHES				
		Carpet	15,563	SF	5 50	85 597
		Floor sealer	15,634	SF	1 50	23 451
		Vinyl composition tiles	2,872	SF	4 00	11 488
		Ceramic floor tiles	20,389	SF	18 00	367,002
		Sheet vinyl flooring	91,798	SF	9 00	826,182
		Linoleum	57,129	SF	10 00	571 290
		Vapor control membrane	110,233	SF	3 50	385 816
		Resilient base	43,316	LF	3 00	129 948
		Ceramic tile base	8,729	LF	18 00	157 122
		Vinyl coved base	5,159	LF	8 00	41 272
		Special floor finishes	203,385	SF	0 25	50,846
		FLOOR FINISHES				2,650 014
C3030		CEILING FINISHES				
		Paint structural soffit	11,196	SF	1 80	20 153
		Accoustic ceiling tiles	125,231	SF	7 00	876 617
		Accoustic ceiling tiles, regular	259	SF	8 00	2,072
		Suspended drywall ceiling, paint	66,699	SF	17 00	1,133,883
		Allowance for bulkheads, and other special ceiling features	202,668	SF	0 70	141,868
		CEILING FINISHES				2,174 593
D1010		ELEVATORS & LIFTS				
		Elevator, 5000 lb, 7 stops	3	EA	400000 00	1,200 000
		ELEVATORS & LIFTS				1,200 000

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
D1520		PLUMBING Plumbing systems Sanitary fixtures, including rough-in connection pipework Residential units Waterclosets Lavatory Shower Kitchen sink Metering, digital and remote reading Fixtures allowance for other areas Condensate drainage Floor drains, hosebibbs, cleanouts, etc Grease interceptor, 1500 gallons Kitchen equipment connections Gas distribution Testing and sterilization Backflow preventer, makeup water and metering for irrigation and landscaping Firestopping/core drilling/seismic bracing Fuel oil distribution Roof drainage Commissioning assistance	203,385	SF	30.00	6,101,550
		PLUMBING				6,101,550
D1530		HVAC HVAC systems Heating, ventilation and air conditioning Air cooled chiller, pumps, hydronic piping, rooftop air handling units, (4) exhaust fans, VAV boxes, DDC controls, testing and balancing Central Toilet and Laundry exhaust system Kitchen grease hood and ductwork Mechanical/electrical room ventilation Isolation room - HEPA filtered Centralized DDC Controls - included Commissioning assistance Firestopping/core drilling/seismic bracing	203,385	SF	39.00	7,932,015
		HVAC				7,932,015

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
D1540		FIRE PROTECTION Automatic wet pipe sprinkler & combination standpipe system to bldg	203,385	SF	9 00	1 830 465
		FIRE PROTECTION				
D5010		ELECTRICAL DISTRIBUTION Electrical distribution Main normal power and distribution Emergency power distribution Machine and equipment power connections Commissioning assistance Firestopping/core drilling/seismic bracing	203,385	SF	13 07	2 658 242
		ELECTRICAL DISTRIBUTION				
D5020		LIGHTING & BRANCH WIRING Lighting & branch wiring systems Lighting fixtures and switches, including conduit and wire Grounding and power specialties User convenience power	203,385	SF	11 50	2,338 928
		LIGHTING & BRANCH WIRING				
D5040		SPECIAL ELECTRICAL SYSTEMS Special electrical systems Telephone/data MDF/IDF and backboards and backbone Telephone/data outlets, box and conduit only Telephone/data cabling Wireless Elderly Emergency Call system Paging, public address system, empty conduit only CATV, including conduit and cable Audio/visual, conduit only Fire alarm system Security system, Access control and instrusion detection CCTV Cabling	203,385	SF	20 44	4 157 189
		SPECIAL ELECTRICAL SYSTEMS				

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
E1059		MISCELLANEOUS EQUIPMENT				
		Window washing	1	LS	75000.00	75,000
		Window washing platforms	150	LF	1000.00	150,000
		Laundry chute		EXCL		
		Food service at galley	7	EA	7500.00	52,500
		Supply and Install:				
		Bathtub with powered lift	14	EA	25000.00	350,000
		Ceiling lift system	14	EA	15000.00	210,000
		Appliances	158	EA	3500.00	553,000
		Warming cabinet, 1-compartment		NA	10000.00	
		Undercounter refrigerator		NA	700.00	
		Install only:		NA		
		Waste disposal unit		NA	50.00	
		Supply station, single auxiliary		NA	600.00	
		Supply station, double main		NA	1000.00	
		Command solution center		NA	200.00	
		Diagnostic set, wall mount		NA	250.00	
		Main Kitchen reheat	1	EA	50000.00	50,000
		Laundry domestic	1	EA	25000.00	25,000
		MISCELLANEOUS EQUIPMENT				1,465,500
E2010		FIXED FURNISHINGS				
		Window blinds	350	SF	9.00	3,150
		Motorized mecho shades	1,380	SF	45.00	62,100
		FIXED FURNISHINGS				65,250
F1034		OTHER SPECIAL CONSTRUCTION				
		Computer room	1	LS	5000.00	5,000
		ADHC	1	LS	50000.00	50,000
		CDC	1	LS	50000.00	50,000
		Isolation room	1	LS	5000.00	5,000
		OTHER SPECIAL CONSTRUCTION				110,000
G10		SITE PREPARATION				
			1	LS	250000.00	250,000
		SITE PREPARATION				250,000
G20		SITE IMPROVEMENT				
			1	LS	2500000.00	2,500,000
		SITE IMPROVEMENT				2,500,000

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY Option D			Estimate Stage: Floor Area: Prepared by:	Concept Stage 203,385 SF GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
G30		SITE/MECHANICAL UTILITIES	1	LS	400000 00	400 000
		SITE/MECHANICAL UTILITIES				
G40		SITE ELECTRICAL UTILITIES	1	LS	250000 00	250,000
		SITE ELECTRICAL UTILITIES				
G50		OTHER SITE CONSTRUCTION				
		OTHER SITE CONSTRUCTION				

Appendix

Cost Estimate Tabulations

OPTION E



OPTION E		Estimate Stage: Floor Area: Prepared by:	Concept Stage: 244,332 SF GB	
El.	Section	Totals		Costs/SF
	UNIFORMAT SUMMARY			
A	SUBSTRUCTURE			
A10	FOUNDATIONS	\$3,760,000	\$3,760,000	\$15.39
A20	BASEMENT CONSTRUCTION	\$0		
B	SHELL			
B10	SUPERSTRUCTURE	\$14,635,424	\$27,377,839	\$112.05
B20	EXTERIOR CLOSURE	\$11,786,915		\$48.24
B30	ROOFING	\$955,500		\$3.91
C	INTERIORS			
C10	INTERIOR CONSTRUCTION	\$12,000,790	\$20,578,652	\$84.22
C30	INTERIOR FINISHES	\$8,577,862		\$35.11
D	SERVICES			
D10	CONVEYING SYSTEMS	\$1,200,000	\$30,522,283	\$124.92
D15	MECHANICAL	\$18,324,900		\$75.00
D50	ELECTRICAL	\$10,997,383		\$45.01
E	EQUIPMENT & FURNISHING			
E10	EQUIPMENT	\$1,091,500	\$1,343,500	\$5.50
E20	FURNISHINGS	\$252,000		\$1.03
F	SPECIAL CONSTRUCTION/DEMOLITION			
F10	SPECIAL CONSTRUCTION	\$110,000	\$110,000	\$0.45
F20	SELECTIVE BUILDING DEMOLITION	\$0		
BUILDING COST		\$83,692,274		\$342.54
G	BUILDING SITWORK			
G10	SITE PREPARATION	\$250,000	\$3,850,000	\$15.76
G20	SITE IMPROVEMENT	\$2,500,000		\$10.23
G30	SITE/MECHANICAL UTILITIES	\$400,000		\$1.64
G40	SITE ELECTRICAL UTILITIES	\$700,000		\$2.86
G50	OTHER SITE CONSTRUCTION			
TOTAL DIRECT COSTS		\$87,542,274		\$358.29
GENERAL CONDITIONS, OH & P		15.00%	\$13,131,341	\$53.74
BOND		1.00%	\$1,006,736	\$4.12
DESIGN CONTINGENCY		15.00%	\$15,252,053	\$62.42
ESTIMATE TOTAL			\$116,932,404	\$478.58

Appendix

Cost Estimate Tabulations

OPTION E		0 Estimate Stage: 0 Floor Area: Prepared by:	Concept Stage 244332 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
	DETAILED SUMMARY				
A10	FOUNDATIONS				
A1010	FOUNDATIONS	244,332	GFA	\$2.62	\$640,000
A1020	SPECIAL FOUNDATIONS	244,332	GFA	\$9.82	\$2,400,000
A1030	SLAB ON GRADE	244,332	GFA	\$2.95	\$720,000
	FOUNDATIONS				\$3,760,000
B10	SUPERSTRUCTURE				
B1010	FLOOR CONSTRUCTION	244,332	GFA	\$47.67	\$11,646,924
B1020	ROOF CONSTRUCTION	244,332	GFA	\$9.33	\$2,280,000
B1030	STAIR CONSTRUCTION	244,332	GFA	\$2.90	\$708,500
	SUPERSTRUCTURE				\$14,635,424
B20	EXTERIOR CLOSURE				
B2010	EXTERIOR WALLS	244,332	GFA	\$31.50	\$7,696,450
B2020	EXTERIOR WINDOWS	244,332	GFA	\$16.07	\$3,925,215
B2030	EXTERIOR DOORS	244,332	GFA	\$0.68	\$165,250
	EXTERIOR CLOSURE				\$11,786,915
B30	ROOFING				
B3010	ROOF COVERINGS	244,332	GFA	\$3.77	\$920,000
B3020	ROOF OPENINGS	244,332	GFA	\$0.15	\$35,500
	ROOFING				\$955,500
C10	INTERIOR CONSTRUCTION				
C1010	PARTITIONS	244,332	GFA	\$23.45	\$5,730,332
C1020	INTERIOR DOORS	244,332	GFA	\$9.00	\$2,198,988
C1030	SPECIALTIES	244,332	GFA	\$16.66	\$4,071,470
	INTERIOR CONSTRUCTION				\$12,000,790
C30	INTERIOR FINISHES				
C3010	WALL FINISHES	244,332	GFA	\$12.13	\$2,963,916
C3020	FLOOR FINISHES	244,332	GFA	\$12.87	\$3,145,689
C3030	CEILING FINISHES	244,332	GFA	\$10.10	\$2,468,257
	INTERIOR FINISHES				\$8,577,862

OPTION E		0 Estimate Stage: 0 Floor Area: Prepared by:	Concept Stage 244332 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
D10	CONVEYING SYSTEMS				
D1010	ELEVATORS & LIFTS	244,332	GFA	\$4.91	\$1,200,000
	CONVEYING SYSTEMS				\$1,200,000
D15	MECHANICAL				
D1520	PLUMBING	244,332	GFA	\$29.00	\$7,085,628
D1530	HVAC	244,332	GFA	\$39.00	\$9,528,948
D1540	FIRE PROTECTION	244,332	GFA	\$7.00	\$1,710,324
	MECHANICAL				\$18,324,900
D50	ELECTRICAL				
D5010	ELECTRICAL DISTRIBUTION	244,332	GFA	\$13.07	\$3,193,419
D5020	LIGHTING & BRANCH WIRING	244,332	GFA	\$11.50	\$2,809,818
D5040	SPECIAL ELECTRICAL SYSTEMS	244,332	GFA	\$20.44	\$4,994,146
	ELECTRICAL				\$10,997,383
E10	EQUIPMENT				
E1059	MISCELLANEOUS EQUIPMENT	244,332	GFA	\$4.47	\$1,091,500
	EQUIPMENT				\$1,091,500
E20	FURNISHINGS				
E2010	FIXED FURNISHINGS	244,332	GFA	\$1.03	\$252,000
	FURNISHINGS				\$252,000
F10	SPECIAL CONSTRUCTION			\$20,000.00	
F1034	OTHER SPECIAL CONSTRUCTION	244,332	GFA	\$0.45	\$110,000
	SPECIAL CONSTRUCTION				\$110,000
F20	SELECTIVE BUILDING DEMOLITION				
F2010	BUILDING DEMOLITION	244,332	GFA	\$0.00	\$0
F2020	HAZARDOUS COMPONENTS ABATEMENT	244,332	GFA	\$0.00	\$0
	SELECTIVE BUILDING DEMOLITION				\$0

Appendix

Cost Estimate Tabulations

OPTION E		0 Estimate Stage: 0 Floor Area: Prepared by:	Concept Stage 244332 SF GB		
Ref.	Section	System Quantity	Unit	\$/Unit	Total Cost
G	BUILDING SITE WORK				
G10	SITE PREPARATION	244,332	GFA	\$1.02	\$250,000
G20	SITE IMPROVEMENT	244,332	GFA	\$10.23	\$2,500,000
G30	SITE/MECHANICAL UTILITIES	244,332	GFA	\$1.64	\$400,000
G40	SITE ELECTRICAL UTILITIES	244,332	GFA	\$2.86	\$700,000
G50	OTHER SITE CONSTRUCTION	244,332	GFA	\$0.00	\$0
	BUILDING SITE WORK				\$3,850,000
	TOTAL DIRECT COSTS				\$87,542,274
	GENERAL CONDITIONS, OVERHEAD & PROFIT	15.00%			\$13,131,341
	BOND	1.00%			\$1,006,736
	Sub-Total				\$101,680,351
	DESIGN CONTINGENCY	15.00%			\$15,252,053
	ESTIMATE TOTAL				\$116,932,404

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION E			Estimate Stage	Concept Stage		
			Floor Area: 244,332	SF		
			Floor Area:	GB		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
A1010		FOUNDATIONS	40.000	SF	16 00	640 000
		FOUNDATIONS				640 000
A1020		SPECIAL FOUNDATIONS	40.000	SF	60.00	2 400 000
		SPECIAL FOUNDATIONS				2 400 000
A1030		SLAB ON GRADE	40.000	SF	18.00	720 000
		SLAB ON GRADE				720.000
B1010		FLOOR CONSTRUCTION	204.332	SF	57 00	11 646 924
		FLOOR CONSTRUCTION				11 646 924
B1020		ROOF CONSTRUCTION	40.000	SF	57 00	2.280.000
		ROOF CONSTRUCTION				2.280.000
B1030		STAIR CONSTRUCTION				
		Stair structure	25.5	ft	17000 00	433 500
B2010		Stair railing	25.5	ft	10000 00	255.000
		Stair/rail to elevator machine room	1	ea	20000 00	20.000
B2020		STAIR CONSTRUCTION				708 500
		EXTERIOR WALLS	153.929	SF	50 00	7 696 450
B2020		EXTERIOR WALLS				7 696 450
		EXTERIOR WINDOWS	46.179	SF	85 00	3 925 215
B2020		EXTERIOR WINDOWS				3 925 215

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL
ASSISTED LIVING STUDY
OPTION E

Estimate Stage: Concept
Floor Area: 244,332 SF
Floor Area: GB

Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
B2030		EXTERIOR DOORS AS option C HM frame/door/hardware 3'x7' 4'x7' 4'-8"x7' Aluminum frame/door/hardware (2) 3'-8"x7' 3'x7' 3'x7'-4" 3'x8'-4" 4'x7'-4" 4'x8'-4" Add for automatic door operator for entry doors Power assist device	13 6 2 3 1 10 4 5 3 3	lv lv lv pr lv lv lv lv ea ea	2350.00 2400.00 2700.00 5500.00 2300.00 2500.00 2500.00 2500.00 2700.00 5000.00 1500.00	30,550 14,400 5,400 16,500 2,300 25,000 10,000 12,500 8,100 15,000 25,500
		EXTERIOR DOORS				165,250
B3010		ROOF COVERINGS	40,000	SF	23.00	920,000
		ROOF COVERINGS				920,000
B3020		ROOF OPENINGS All as Option C Roof opening for mech equipment (allow) Roof opening for soiled linen chute vent stack Roof opening roof hatch	30 1 3	ea ea ea	1000.00 1000.00 1500.00	30,000 1,000 4,500
		ROOF OPENINGS				35,500

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION E			Estimate Stage: Concept Stage Floor Area: 244,332 SF Floor Area: GB			
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C1010		PARTITIONS				
		Partition, metal stud, drywall both sides	44,000	SF	15 00	660,000
		Partition, metal stud, drywall both sides, accoustic insulation	169,000	SF	16 00	2,704,000
		Partition, one hour rated, metal stud, drywall both sides	19,000	SF	18 00	342,000
		Partition, one hour rated, metal stud, drywall both sides, accoustic insulation	76,000	SF	16 00	1,216,000
		Partition, two hour rated, metal stud, drywall both sides	3,000	SF	18 00	54,000
		Partition, two hour rated, metal stud, drywall both sides, accoustic insulation	11,000	SF	20 00	220,000
		Premium for duct liner	60,000	SF	1.50	90,000
		Column covers	1	LS	200000.00	200,000
		Fire stopping and special features	244,332	SF	1 00	244,332
PARTITIONS						5,730,332
C1020		INTERIOR DOORS				
		Doors Complete	244,332	SF	9 00	2,198,988
Doors complete						2,198,988

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL
ASSISTED LIVING STUDY
OPTION E

Estimate Sta| Concept Stage
Floor Area: 244,332 SF
Floor Area: GB

Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C1030		SPECIALTIES				
		Misc specialties listed below	244,332	SF	12.60	3,078,583
		Bath fixtures				
		Phone shelf	43	LF	200.00	8,600
		Firestopping	244,332	SF	0.20	48,866
		Signage				
		Floor directory 14" x 15 1/2", wood	8	EA	700.00	5,600
		6'8" x 10" acrylic in wood frame	32	EA	1000.00	32,000
		Directional/wall 14" x 15 1/2", wood	16	EA	700.00	11,200
		Residence wing directional sign	32	EA	600.00	19,200
		Stair/restroom/etc. 7 1/4" x 6 3/8", wood	124	EA	200.00	24,800
		Vinyl copy on glass	3	EA	200.00	600
		Door jamb identification, 3" x 1", acrylic	1,137	EA	40.00	45,480
		Accessible Building entrance ID, 5" x 5", acrylic	3	EA	85.00	255
		Unisex restroom door symbol, 12" dia., acrylic	56	EA	225.00	12,600
		Emergency evacuation map, 14" x 16 1/2", acrylic	40	EA	700.00	28,000
		Firefighter's stairwell information, 10" x 13", acrylic	32	EA	225.00	7,200
		Maximum occupancy notice, 9" x 9", acrylic	40	EA	150.00	6,000
		Biohazard warning, 6 3/8" x 6 3/8", acrylic	9	EA	150.00	1,350
		No Smoking symbol	3	EA	130.00	390
		Folding partition	1,244	SF	75.00	93,266
		Fire extinguishers	244,332	SF	0.15	36,650
		Miscellaneous metalwork	244,332	SF	1.00	244,332
		Miscellaneous carpentry	244,332	SF	1.00	244,332
		Miscellaneous specialties	244,332	SF	0.50	122,166
		SPECIALTIES				4,071,470

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION E			Estimate Stage	Concept Stage		
			Floor Area: 244,332	SF		
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
C3010		WALL FINISHES				
		Paint to walls	370,000	SF	1 15	425,500
		Ceramic wall tiles	76,437	SF	18 00	1,375,866
		MDC wall covering at door opes	3,331	SF	50 00	166,550
		Wall corner guards	10,500	LF	18 00	189,000
		Bumper guards	10,200	LF	35 00	357,000
		Handrail	9,000	LF	40 00	360,000
		Acrovyn wainscot	5,000	SF	18 00	90,000
		WALL FINISHES				2,963,916
C3020		FLOOR FINISHES				
		Carpet	15,563	SF	5.50	85,597
		Floor sealer	15,634	SF	1.50	23,451
		Vinyl composition tiles	2,872	SF	4.00	11,488
		Ceramic floor tiles	23,000	SF	18.00	414,000
		Sheet vinyl flooring	110,000	SF	9.00	990,000
		Linoleum	77,000	SF	10.00	770,000
		Vapor control membrane	130,000	SF	3.50	455,000
		Resilient base	43,316	LF	3.00	129,948
		Ceramic tile base	8,729	LF	18.00	157,122
		Vinyl coved base	6,000	LF	8.00	48,000
		Special floor finishes	244,332	SF	0.25	61,083
		FLOOR FINISHES				3,145,689
C3030		CEILING FINISHES				
		Paint structural soffit	11,196	SF	1.80	20,153
		Acoustic ceiling tiles	155,000	SF	7 00	1,085,000
		Acoustic ceiling tiles, regular	259	SF	8 00	2,072
		Suspended drywall ceiling, paint	70,000	SF	17 00	1,190,000
		Allowance for bulkheads, and other special ceiling features	244,332	SF	0.70	171,032
		CEILING FINISHES				2,468,257

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL
ASSISTED LIVING STUDY
OPTION E

Estimate Stage: Concept
Floor Area: 244,332 SF
Floor Area: GB

Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
D1010		ELEVATORS & LIFTS				
		Elevator, 5000 lb, 7 stops	3	EA	400000.00	1,200,000
		ELEVATORS & LIFTS				1,200,000
D1520		PLUMBING	244,332	SF	29.00	7,085,628
		PLUMBING				7,085,628
D1530		HVAC	244,332	SF	39.00	9,528,948
		HVAC				9,528,948
D1540		FIRE PROTECTION				
		Automatic wet pipe sprinkler & combination standpipe system to bldg	244,332	SF	7.00	1,710,324
		FIRE PROTECTION				1,710,324
D5010		ELECTRICAL DISTRIBUTION	244,332	SF	13.07	3,193,419
		ELECTRICAL DISTRIBUTION				3,193,419
D5020		LIGHTING & BRANCH WIRING	244,332	SF	11.50	2,809,818
		LIGHTING & BRANCH WIRING				2,809,818
D5040		SPECIAL ELECTRICAL SYSTEMS	244,332	SF	20.44	4,994,146
		SPECIAL ELECTRICAL SYSTEMS				4,994,146

LAGUNA HONDA HOSPITAL ASSISTED LIVING STUDY OPTION E			Estimate Stage: Concept Stage Floor Area: 244,332 SF Floor Area: GB			
Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
E1059		MISCELLANEOUS EQUIPMENT				
		Window washing	1	LS	75000.00	75 000
		Window washing platforms	150	LF	1000.00	150 000
		Laundry chute		NA		
		Food service at galley	7	EA	7500.00	52,500
		Supply and Install:				
		Bathtub with powered lift	4	EA	25000.00	100,000
		Ceiling lift system	2	EA	15000.00	30,000
		Appliances	174	EA	3500.00	609,000
		Main kitchen rheat	1	EA	50000.00	50,000
		Laundry - domestic	1	EA	25000.00	25,000
		MISCELLANEOUS EQUIPMENT				1,091,500
E2010		FIXED FURNISHINGS				
		Window blinds	36,000	SF	7.00	252,000
		Motorized mecho shades		NA		
		FIXED FURNISHINGS				252,000
F1034		OTHER SPECIAL CONSTRUCTION				
		Computer room	1	LS	5000.00	5,000
		ADHC	1	LS	50000.00	50,000
		CDC Areas	1	LS	50000.00	50,000
		Isolation Room	1	LS	5000.00	5,000
		OTHER SPECIAL CONSTRUCTION				110,000
G10		SITE PREPARATION				
			1	LS	250000.00	250,000
		SITE PREPARATION				250,000

Appendix

Cost Estimate Tabulations

LAGUNA HONDA HOSPITAL
ASSISTED LIVING STUDY
OPTION E

Estimate Stat: Concept Stage
Floor Area: 244,332 SF
Floor Area: GB

Elem.	Div.	Description	Quantity	U.o.M.	Unit Cost	Total
G20		SITE IMPROVEMENT	1	LS	2500000.00	2,500,000
		SITE IMPROVEMENT				2,500,000
G30		SITE/MECHANICAL UTILITIES	1	LS	400000.00	400,000
		SITE/MECHANICAL UTILITIES				400,000
G40		SITE ELECTRICAL UTILITIES	1	LS	700000.00	700,000
		SITE ELECTRICAL UTILITIES				700,000
G50		OTHER SITE CONSTRUCTION				
		OTHER SITE CONSTRUCTION				

Appendix

HFS Review of Funding Options & License Criteria

Residential Care for the Elderly (RCFE) Regulations for the State of California

The activities that DSS will require to be made available to residents includes:

- 1 Socialization achieved through:
 - group discussion
 - arts and crafts
 - music
 - care of pets
- 2 Daily living skills to maintain independent functioning
- 3 Facilitation of personal interests and pursuits
- 4 Physical activities such as:
 - games
 - sports
 - exercise
- 5 Education through classes or activities
- 6 Free time
- 7 Facilitation and utilization of community resources for residents such as:
 - Attendance at the place of worship of one's choosing
 - Community events such as concerts, tours and plays
 - Organized day trips

The facility needs to provide a sufficient space for indoor and outdoor activities

Residential Care for the Elderly (RCFE)
Regulations for the State of California

The regulation section, called Prohibited Health Conditions, specifies a list of health conditions that are not automatically allowed in RCFEs. These conditions will be allowed provided that DSS is informed in advance and able to give an exemption. In these cases, residents will be often cared for by an appropriately skilled professional (ASP).

The conditions are:

- 1 Catheter Care
- 2 Colostomy Ileostomy Care
- 3 Contraetures
- 4 Dermal Ulcers
- 5 Diabetes
- 6 Enema, Suppositories/Fecal Impaction
- 7 Gastrostomy Care*
- 8 Incontinence Bowel/Bladder
- 9 Injections
- 10 IPPB Machine Use
- 11 Oxygen Administration
- 12 Liquid Oxygen
- 13 Naso-gastric Tubes*
- 14 Staph Infections*
- 15 Total Care*
- 16 Tracheostomies*
- 17 Wound Care
- 18 Bedridden Residents

* Conditions likely NOT to be exempted

Appendix

HFS Review of Funding Options & License Criteria

Residential Care for the Elderly (RCFE) Regulations for the State of California

This facility check list (see below) is a useful tool that summarizes all the requirements that will need to be satisfied to acquire and maintain the license. RCFEs are subjected to annual review from DSS and to regular visits from the allocated Ombudsman. After a conversation with a DSS employee who conducts such surveys, it is clear that DSS relies on the Ombudsman to conduct regular check on the facility. He told me that each employee carries a load of 100 cases and that, on average, they only survey 30% of the allocated load, due to time and budget constraints. Hence, annual surveys are not regularly conducted, unless they are alerted of irregularities or there is an official complaint. Aside from what the written regulation states,

I asked him to describe what criteria he uses during his site visit and he said that they pay particular attention to the following:

Basic Health and Safety inspection

Staffing requirement up to date such as:

- Fingerprinting on file
- TB screening up to date
- Required training
- Level of staffing is adequate
- Physician report up to date
- Medical records up to date

The licensee receives a notification that the licensee needs to be renewed up to 120 days prior to expiration. However, DSS is not required to inform the facility and requires no advance notice to inspect the premises.

Principles and Key Characteristics of Assisted Living

Defining Assisted Living

While assisted living is the most common term used in the nation both by the industry and state regulatory agencies, assisted living settings may be known by different names, including, but not limited to, residential care, personal care, adult congregate care, boarding homes, and domiciliary care. Regardless of what it is called, the National Center for Assisted Living (NCAL), located in Washington, DC, believes assisted living should be:

- A congregate residential setting that provides or coordinates personal services, 24-hour supervision and assistance (scheduled and unscheduled), activities and health-related services, and that includes at least one awake staff member at all times;

The following characteristics should be satisfied:

- Designed to minimize the need to move;
- Designed to accommodate individual residents' changing needs and preferences;
- Designed to maximize residents' dignity, autonomy, privacy, socialization, independence, choice, and safety;
- Designed to encourage family and community involvement; and
- A setting that provides assistance in maintaining and enhancing the physical, emotional, intellectual, social, and spiritual needs of residents based on their preferences and that encourages the personal development of residents, on an individual basis; Physical activity that maintains and enhances fitness; Family and community involvement; and development of positive relationships among residents, staff, families and the community.

Size

An assisted living residence is not defined by its capacity for residents, but by the scope of the services it provides. The size and configuration of each assisted living residence should be determined by consumer demand and the types of services provided. Services to individuals with mental illnesses, developmental disabilities, Alzheimer's disease, other forms of dementia, or disabilities requiring specialized services should be delivered in an appropriate and safe setting in compliance with state and federal regulations.

Appendix

HFS Review of Funding Options & License Criteria

Physical Plant

- An assisted living residence should be designed, operated, and maintained in a manner appropriate to the special needs of the population served. The residence should be located, constructed, and equipped in compliance with all applicable local codes and state and federal regulations.
- An assisted living facilities should have effective fire safety systems. Smoke detectors should be installed in all rooms and common areas in existing buildings that are not fully sprinklered. NCAL believes that new facilities should be fully sprinklered. Existing facilities without sprinklers should be retrofitted for sprinklering where economically and physically feasible.
- An assisted living setting should be designed in a way that maximizes the quality of life, independence, autonomy, safety, dignity, socialization, choice, and privacy of residents. Settings should also be designed in a manner that encourages family and community involvement.

Move-In and Occupancy

- New residents and/or their family members should receive an orientation about the services the assisted living residence offers.
- Occupancy agreements should clearly specify what services can and will be provided, the facility's rates for all services and payment structure, and the facility's occupancy and relocation criteria. Agreements should be reviewed periodically to ensure accuracy. Copies of original and any amended agreements should be provided to the resident and/or responsible party, together with a service plan that is developed to indicate services that will be delivered to meet particular needs based on the individual's physical, psychosocial, and cognitive capabilities

Health Needs

- The assisted living residence should provide daily supervision or assistance with activities of daily living (eating, bathing, dressing, toileting, and transferring) and instrumental activities of daily living (such as shopping, meal preparation, telephoning, medication assistance, etc.), as needed. It

should coordinate services by outside agencies and monitor the activities of the resident to ensure his or her health, safety, and well being. Daily assistance with activities may include the administration, supervision and/or assistance with self-administration of medication by a qualified staff person, and other health care services as permitted by state laws, rules, and regulations. Daily monitoring of residents' health status should be an available service.

- An emphasis on wellness should be part of each setting's approach toward health care delivery. In addition, staff should assure that prompt and appropriate medical and other health-related services are obtained when required. The health care of each resident should be under the supervision of a physician of his or her choice and a nurse should be available, on an on-call basis, 24 hours a day. Providers should inform consumers about the policies and procedures followed in emergency medical situations.
- Residents with temporary periods of incapacity due to major illness, injury, or recuperation from surgery should be allowed to remain in the facility or be readmitted from a hospital if appropriate services can be provided. If possible, the facility should help residents remain in the facility when death is imminent if appropriate hospice and/or palliative services can be provided in the setting.

Staff Qualifications and Training

The assisted living residence administrator (or director) should be responsible for the overall operation of the facility. The administrator should ensure that all staff members are qualified to care for residents and are competent in performing their duties consistent with applicable state and federal regulations. The administrator should assure that residents receive all services indicated in their service plan.

The personal care staff should:

- Be sufficient in numbers and qualifications to meet the 24-hour scheduled and unscheduled needs of residents and to deliver provided services; and Have adequate skills, education, experience, and ongoing training to serve residents and their families in a manner consistent with the philosophy of assisted living.

Appendix

HFS Review of Funding Options & License Criteria

- Personal care staff or medication assistants whose responsibilities include administration, assistance with self-administration, or supervision of medications should be qualified by certification and/or training.
- The number and type of staff employed by an assisted living facility should depend on a number of factors, including state regulations, the number of people living in the facility, each resident's service requirements, and the range of services offered.
- Assisted living residences should offer 24-hour supervision and oversight of residents. NCAL believes that at least one staff member should be awake at all times. Residences should embrace a philosophy that allows individuals to remain at the assisted living community as long as staff can properly provide for residents' health, safety, and well being within the scope of the service program.

Resident Rights

The philosophy of assisted living emphasizes the right of the individual to choose the setting for care and services. Resident rights may include the following:

- Privacy;
- Being treated at all times with dignity and respect;
- Controlling the delivery of personal finances;
- Retaining and having use of personal possessions;
- Interacting freely with others both within the assisted living residence and in the community;
- Practicing religion or abstaining from religious practice;
- Controlling receipt of health-related services;
- Being free from abuse and neglect;
- Organizing and participating in resident councils and other resident activities;
- Being free from chemical and physical restraints;
- Complaining without the fear of reprisal; and
- Accepting or refusing services.

Upon move-in, all residents should be given a copy of their rights and responsibilities and should be encouraged to ask questions or discuss their rights with staff or the administrator at any time. A copy of those rights and responsibilities should be posted in a conspicuous place at all times.

Assisted living administrators should also:

Permit access to the facility and to residents (with the individual resident's permission) by approved advocates and community organizations at reasonable times; Ensure that an informal or formal communications process is in place between the residence administration, residents, and families;

Establish residence rules governing visitors, usage of tobacco and alcohol, and the use of personal property; and Ensure each resident is free from discrimination as provided by local, state, and federal law.

Licensure and Certification and Quality Measures

Each state maintains a set of rules and regulations with applicable state standards.

Appendix

HFS Review of Funding Options & License Criteria

California

Agency:

Department of Social Services,

Community Care

Licensing Division

(916) 324-4312

Phone:

Thomas Stahl

Contact:

Residential Care Facilities for the
Elderly

Licensure Term:

thomas.stahl@dss.ca.gov

E-mail:

www.ccl.d.ca.gov

Website:

Definition of Facility

A Residential Care Facility for the Elderly (RCFE) is a housing arrangement chosen voluntarily where 75 percent of the residents are 60 years of age or older and where varying levels of care and supervision are provided, as agreed to at the time of admission or as determined at subsequent times of reappraisal. Any younger residents must have needs compatible with other residents.

Facility Scope of Care

An RCFE provides care and supervision to its residents, including assistance with activities of daily living (ADLs) observation and reassessment, and, when appropriate, postural support that can be released by the resident. Residents with the following conditions or in need of the following incidental medical services may be admitted or retained as long as the applicable RCFE regulations are followed and those procedures and services requiring a nurse or PT are provided by an appropriately skilled professional: administration of oxygen, catheter care, colostomy/ileostomy care, contractures, diabetes, enemas/suppositories, incontinence, injections, intermittent positive pressure breathing machines, stage I and II dermal ulcers and wound care. Dementia care can be provided if dementia care regulations are followed.

Levels of Assisted Living Care

Type 1

Residents live in a licensed facility that provides safe and clean living accommodations and three meals a day. Residents may require minimal assistance with ADLs, including significant assistance with 1 to 2 ADLs. Residents must be able to evacuate the facility under their own power (be mobile). Residents may receive assistance with medications or have medications administered by a nurse. Residents may receive home health services through

	individual contract with home health agency Residents receive 24-hour general monitoring, 7 days a week Residents may receive general ursing care according to facility policy Residents participate in developing a service plan
Type 2	Residents live in a licensed facility , permits aging in place Residents may receive full assistance with ADLs Residents may be semi-independent and may require the assistance of one person for transfers or to evacuate the facility Residents may receive assistance with medication or have medications administered by a nurse Residents must be free of cominicable diseases
Special services	Some Assisted Living Facilities can handle special needs, such as: Cognitive disabilities Short-term care Respite Care (to give regular caregivers a break) Interim medical care after a hospital stay Alzheimer s Parkinson s Terminal illnesses (Hospice Care)
Disclosure Items	Prior to accepting a resident, the RCFE must complete an admission agreement with the resident and his/her responsible party. The admission agreement must include basic and optional services available, payment provisions, refund conditions, and eviction policies and procedures. Written notice must be given to the resident 60 days prior to any basic rate change. Admission agreements are required to disclose: a comprehensive description of any items and services provided under a single fee, a description and schedule of all items and services not included in the single fee; a description of any preadmission fee (a licensee cannot require a preadmission fee from a recipient under the State Supplementary Program for the Aged, Blind and Disabled); an explanation of the use of third party services; a comprehensive description of billing and payment policies and procedures, conditions under which rates may be increased; policy concerning family visits and refunds; and conditions under which the agreement may be terminated. Additional disclosures

Appendix

HFS Review of Funding Options & License Criteria

are required if the facility advertises or promotes special dementia care.

Third Party Scope of Care Facility

Facility staff are prohibited from providing any care beyond that allowed within the parameters of the RCFE license. However, hospice agencies may provide services to terminally ill residents. Visiting nurses and medical professionals may provide services within their scope of practice to residents at the facility. Incidental medical services may be provided by a home health agency if certain conditions are met.

Medication Management

Facility staff, unless he/she is an appropriately skilled professional acting within his/her scope of practice, may not administer medications to residents, but may assist them with the self-administration of medications.

Move-In/Move-Out

Residents may not be admitted or retained if they have active Requirements communicable tuberculosis; require 24-hour skilled nursing or intermediate care; have a mental disorder resulting in ongoing behavior that would upset the general resident group; would require a greater amount of care and supervision than the other residents; or cannot generally benefit from the program services available in the facility. A facility may issue a 30-day notice for: nonpayment of the rate for basic services within 10 days of due date; failure to comply with state or local law; failure to comply with general facility policies; a need not previously identified emerges and a reappraisal has been conducted and the resident is no longer appropriate for the facility; or change of use of the facility. The department may grant a three-day notice if the resident poses a threat to himself or others.

Resident Assessment

Residents must be assessed prior to move-in and evaluated for functional capacity, mental condition, and social factors. While no standardized form is required, an optional assessment form is available on the agency's Website. The appraisal must be updated at least once a year or upon significant change in condition. A physician report covering specific areas is also required prior to move-in.

Physical Plant	The regulations allow for private or semi-private resident Requirements rooms. Resident rooms must be furnished by the licensee or resident and be of sufficient size to allow for easy passage of wheelchairs, walkers, and any required equipment such as oxygen. A maximum of two residents is allowed per resident bedroom.
Bathroom Requirements	Private and shared toilets, bathing, and lavatory facilities are allowed. There must be at least one toilet and wash basin for each six persons, and one bathtub or shower for each 10 persons, including residents, family and personnel.
Alzheimer's Unit Requirements	RCFEs may admit residents who are diagnosed by a physician as having dementia if certain requirements are met, including an annual medical assessment, adequate supervision, enhanced physical plant safety requirements, and an appropriate activity program. Use of egress alert devices, delayed egress, and locked facility doors and perimeters are also allowed if specified additional requirements are met. Delayed egress and locked doors perimeters require special fire clearances, and locking is only allowed with prior approval from CCLD.
Staffing Requirements	Facility personnel must be sufficient to provide the services necessary to meet resident needs. In RCFEs caring for 16 or more residents, there must be awake night staff.
Administrator	Administrators must complete a 40-hour initial Certification.
Education/Training	Training Program from one of the department's approved training vendors and pass a written test. Administrators who possess a valid Nursing Home Administrator license are exempt from completing an approved initial Certification Training Program and taking the related written test, but must complete 12 hours in the core areas of laws and regulations, use and misuse of medication, and resident admission, retention, and assessment procedures. Administrators in facilities with a capacity of 16 or more residents must also have specified

Appendix

HFS Review of Funding Options & License Criteria

Continuing Education	levels of college education and experience providing care to the elderly.
(CE) Requirements	Administrators must complete 40 hours of continuing education units every two years in areas related to any of the uniform core knowledge areas. These 40 hours must include eight hours in Alzheimer's disease and dementia training. Licensed Nursing Home Administrators with a current license are only required to complete 20 of the 40 hours of continuing education.
Entity Approving CE Program	The CCLD's Administrator Certification Section.
Staff Training for Alzheimer's Care	All staff who care for residents with dementia must receive training in dementia care. In addition, care staff in facilities that advertise that they specialize in dementia care must receive six hours of dementia care orientation within the first four weeks of employment and at least eight hours of dementia care in-service training per year.
Life Safety	Prior to licensure, each RCFE must secure and maintain a fire clearance approved by the fire authority having jurisdiction. To obtain a fire clearance, the RCFE must meet standards established by the State Fire Marshal and the fire authority having jurisdiction for the protection of life and property against fire. For example, RCFEs licensed for seven or more residents must have sprinklers. (In California, sprinkler systems should meet National Fire Protection Association standards.) All RCFEs must have smoke detectors. In addition, each RCFE must have a current, written emergency disaster plan that contains a plan for evacuation, identifies temporary relocation sites, and details staff assignments in the event of a disaster or an emergency. The emergency disaster plan must be posted prominently in the facility. Facilities with delayed-egress devices or locked doors/perimeters must conduct fire and earthquake drills every three months on each shift.
Staff Education/Training	All staff must have on-the-job training or related experience in the job assigned to them. Staff who assist residents with personal ADLs must receive at least

10 hours of initial training within the first four weeks of employment and at least four hours annually thereafter. Food service and activity directors in facilities with a capacity of 16 or more must have specified experience and education or training.

Medicaid Policy and

In May 2005, the California State Department of Health Reimbursement Services obtained a Home- and Community-Based Services waiver to provide a Medi-Cal benefit to persons participating in the Assisted Living Waiver Pilot Project (ALWPP). Participants must be both Medi-Cal eligible and nursing-home eligible. They will reside in either a licensed RCFE or publicly subsidized housing. The ALWPP is being tested in three counties and has a capacity of 1,000 participants over its three-year life span. Qualified RCFEs in the test counties began enrolling residents under the pilot program in April 2006.

Medicare Policy and

care

Reimbursement

facility (RCRFE) Medicare does not pay for board and care assistance. The optional Medicare Part B covers some home health care services (see funding operations) Medicare now pays for Hospice care in AL facilities (see funding operations)

Leno Bill, AB2968

The bill requires DHS to develop and implement a program to provide a community-living support benefit to eligible Medi-Cal beneficiaries. Eligibility for the benefit would be limited to persons who are eligible for Medi-Cal, who are residents of San Francisco who would otherwise be homeless, living in shelters, or institutionalized, and who meet at least one of two other criteria. These community-based housing units may include, but are not limited to, the living area or unit within a facility that is specifically designed to provide ongoing assisted living services, licensed residential care facilities for the elderly, publicly funded senior and disabled housing projects, or supportive housing sites that serve chronically homeless individuals with chronic or disabling health conditions

Appendix

HFS Review of Funding Options & License Criteria

Laguna Honda Hospital Replacement Project State and Federal Funding Sources for Independent and Assisted Living Facilities		
	CalHome Program	
Organization	California Dept. of Housing and Community Development	Predevelopment Loan Program (PDLF)
Address	1800 Third Street	1801 Third Street
City	Sacramento	Sacramento
State	CA	CA
Zip	94252	94252
Phone	(916) 327-3713	(916) 327-3713
Organization Type	State Government	State Government
Website	www.hcd.ca.gov/ca/calhome	www.hcd.ca.gov/ca/pdlf
Program Description	Grants to local public agencies and nonprofit developers to assist individual households through deferred-payment loans; direct, forgivable loans to assist development projects involving multiple ownership units, including single-family subdivisions	Provide predevelopment capital to finance the start of low income housing projects.
	Type of Assistance	
	Grants/ Construction Loans/Acquisition Loans/Rehab Loans	Short term Loans
Activities Funded	Acquisition New For-Sale Housing Energy Conservation Infrastructure Development	Planning/Feasibility Studies, Infrastructure Development
	Average Loan/Grant Amount	
	Not specified	\$100,000.00
	Loan Grant Details (if any)	
	Applications will be invited through the issuance of Notices of Funding Availability.	Predevelopment costs of projects to construct, rehabilitate, convert or preserve assisted housing, including site control, site acquisition. Applications are evaluated on a continuous basis
Loan Interest Match Funds Required Who Can Apply	No Cities with less than 50,000 population Cities with more than 50,000 population Counties Non-Profit Corporations	No Cities with less than 50,000 population Cities with more than 50,000 population Counties Non-Profit Corporations
Selection Criteria		

**Laguna Honda Hospital Rep
State and Federal Funding !**

Organization	Congregate Housing Services Program U.S. Dept. of Housing and Urban Development	Economic Development Initiative U.S. Dept. of Housing and Urban Development
Address City State Zip Phone Organization Type Website Program Description	451 7th St. SW Washington DC 20410 (202)708-1577 Federal Government www.hud.gov Provides grants to public agency or private non-profits to provide meal services and other supportive services to frail elderly and disabled residents in federally assisted housing. Also supports remodeling to meet physical needs.	451 7th St. SW Washington DC 20410 (202)708-1577 Federal Government www.hud.gov Supports guaranteed loans under Sec. 108 by providing grants for economic development activities to local governments to strengthen the economic feasibility of projects financed with Sec. 108 funds
Type of Assistance	Grants	Grants
Activities Funded	Operation Administration Social Services Group Homes/Congregate Care	Job Training Acquisition Public Works Rehab of Apartments Rehab of Owner-Occupied Housing
	Also, meal services and other supportive services to frail elderly or disabled individuals who are residing in federally-assisted housing.	Also, mixed-use projects with housing components. In public works, site improvements and infrastructure are eligible activities
Average Loan/Grant Amount	\$250,000.00	\$50,000,000.00
Loan Grant Details (if any)	Program funds five years of services from a single year's appropriation. Referral of existing only. As grants are for a five year period, no new grants at this time. Contact for more information.	EDI grants are proportionate with Sec. 108 loan guarantee commitments
Loan Interest Match Funds Required Who Can Apply	Yes Counties Native American Tribes/Reservations Non-Profit Corporations Public Housing Agencies	No Cities with more than 50,000 population Cities with less than 50,000 population Counties
Selection Criteria		Applicant capacity and experience, level of distress in community, soundness of approach, leveraging of resources, comprehensiveness and coordination with other groups

Appendix

HFS Review of Funding Options & License Criteria

Laguna Honda Hospital Rep
State and Federal Funding :

		Housing Opportunities for Persons with AIDS(HOPWA)	Section 108 Loan Guarantee
Organization	U.S. Dept. of Housing and Urban Development	U.S. Dept. of Housing and Urban Development	
Address	451 7th St. SW	451 7th St. SW	
City	Washington	Washington	
State	DC	DC	
Zip	20410	20410	
Phone	(202)708-1577	(202)708-1577	
Organization Type	Federal Government	Federal Government	
Website	www.hud.gov	www.hud.gov	
Program Description	Provides local governments and non-profits with grants to devise long-term comprehensive strategies for meeting the housing needs of persons with HIV/AIDS and their families.	Program allows jurisdictions to pledge future CDBG grants as collateral to guarantee private market loans to allow large community development projects, such as acquisition of property, rehabilitation, demolition, etc.	
Type of Assistance	Grants	Loan Guarantee	
Activities Funded	Social Services Single Room Occupancy (SRO) Hotels Group Homes/Congregate Care Operation Administration Rehab of Apartments	Rehab of Owner-Occupied Housing Infrastructure Development Single Room Occupancy (SRO) Hotels Group Homes/Congregate Care Community Facilities Human Service Facilities	Rehab of Apartments Business Start-Ups/Expansion/Retention Downtown Revitalization Energy Conservation Acquisition Preservation of Affordable Housing Self-Help Housing
Average Loan/Grant Amount	\$257,000,000.00	\$2,054,000,000.00	Eligible applicants may borrow up to 5 times their most recent CDBG allocation.
Loan Grant Details (if any)	Maximum grant for program activities is \$1,200,000, plus up to 3% of the program activity grant amount for administrative costs. Formula: Statutory formula allocation.		
Loan Interest Match Funds Required Who Can Apply	No Cities with less than 50,000 population Cities with more than 50,000 population Counties Rural Communities Non-Profit Corporations Public Housing Agencies	No Cities with more than 50,000 population Cities with less than 50,000 population Counties	
Selection Criteria	Innovativeness of proposed project; potential replicability of project in other similar localities on a nationwide basis.	If loan guarantee authority is available and application is otherwise approvable, loan guarantee commitment will be made.	

Laguna Honda Hospital Rep
State and Federal Funding :

	Assisted-living Conversion Program (ALCP)	Housing Enabled by Local Partnerships
Organization	U.S. Dept. of Housing and Urban Development	
Address	451 7th St. SW	California Housing Finance Agency (CalHFA)
City	Washington	1121 L St. 7th Fl.
State	DC	Sacramento
Zip	20410	CA
Phone	(202)708-1577	95814
Organization Type	Federal Government	(916)322-5123
Website	www.hud.gov	State Government
Program Description	Funding will cover basic physical conversion of existing project units, common and services space. The ALCP provides funding for the physical costs of converting some or all of the units of an eligible development into an ALF, including the unit configuration, common and services space and any necessary remodeling, consistent with HUD or the State's statute/regulations (whichever is more stringent)	The HELP Program employs a loan-to-lender approach to provide 10-year, 3% simple interest rate per annum, minimally restrictive loans to local government agencies. The program challenges local agencies to prioritize their unmet housing needs and to design housing programs that target their particular priorities. This approach allows the local agency to more closely match local housing policy and accountability with project performance. Increasingly, the program is being used to facilitate affordable housing within more targeted comprehensive local programs for neighborhood revitalization and economic development
Type of Assistance	Grants/Loans	Loans and Financing
Activities Funded	Assisted living facilities conversion	<p>Acquisition Preservation of Affordable Housing Rehab of Apartments Rehab of Owner-Occupied Housing</p>
Average Loan/Grant Amount	Not specified	HELP Program funds must be used to directly provide affordable housing units. Housing units must be affordable for at least 10 years, with "affordable" being defined in the context of the unmet housing needs and priorities of the locality. HELP Program funds may not be used for technical assistance or administrative costs
Loan Grant Details (if any)		\$10,000,000.00 Typically open application periods are announced each February and August Program funds are limited to no more than \$2,000,000 per proposal. In addition, applicants will also be limited to one approved proposal in each fiscal year. Refer to funding announcements for more specifics. The HELP Loan is an unsecured loan to the loan agency. Local agencies may structure the funds into a loan or grant forming for their development purposes.
Loan Interest	3% simple interest	
Match Funds Required	Yes	
Who Can Apply	Cities with less than 50,000 population Cities with more than 50,000 population Counties Public Housing Agencies	
Selection Criteria		1 extent units are affordable, 2 efficiency of local program costs 3. maximization of benefit, 4 implementation readiness 5 relative impact of resources in accomplishing the local objective 6. comprehensiveness of program design

Appendix

HFS Review of Funding Options & License Criteria

Laguna Honda Hospital Rept

State and Federal Funding :

Metropolitan Transportation Commission			Low-Income Housing Tax Credit Program
Organization	Joseph P. Bort MetroCenter		
Address	101 Eighth St	Tax Credit Allocation Committee	
City	Oakland	915 Capitol Mall Rm. 11C	
State	CA	Sacramento	
Zip	94607	CA	
Phone	(510) 817-5700	95814	
Organization Type	Regional transportation planning agency	(916) 654-6340	
Website	www.mtc.ca.gov	State Government	
Program Description	Provides grants for compact development of housing	www.treasurer.ca.gov/CTCAC/	
		To encourage low-income housing production and provide lower rents by offering a federal and State income tax credit based on the cost of acquiring, rehabilitating or constructing low-income housing.	
Type of Assistance	Grants	Equity Investment/Tax credit for investment in projects providing lower-income housing	
Activities Funded	Downtown Revitalization Planning/Feasibility Studies	New Rental Housing Rehab of Apartments Preservation of Affordable Housing Single Room Occupancy (SRO) Hotels Acquisition	
Average Loan/Grant Amount		\$39,000,000.00	
Loan Grant Details (if any)		Federally-subsidized units receive a lower tax credit rate than non-federally subsidized units.	
Loan Interest	Yes	Yes	
Match Funds Required	Cities with less than 50,000 population	Cities with more than 50,000 population	
Who Can Apply	Cities with more than 50,000 population Counties	Cities with less than 50,000 population Counties Native American Tribes/Reservations Public Housing Agencies Non-Profit Corporations Individuals	
Selection Criteria	For HIP grants, sponsors must submit an application demonstrating compliance to the HIP eligibility criteria. The eligibility requirements are: proposed housing project must be in the initial planning stages, project must be within 1/3 mile walk from the center of the development to a trunk line transit station, a pedestrian path of travel from the center of the project to the transit stop must be provided and demonstrated on a site plan, mixed use development is encouraged.	Deeper income targeting, local finance or owner equity and large family units or SROs.	

Laguna Honda Hospital Replacement Project
Non-profit Funding Sources for Independent and Assisted Living Facilities

	Mercy Loan Fund	Permanent Loan Program
Organization	Mercy Loan Fund	Rural Community Assistance Corporation
Address	601 E. 18th Ave. Suite 150	
City	Denver	
State	CO	
Zip	80202	
Phone	(303) 830-3385	
Organization Type	Not-For-Profit	
Website	http://www.mercyhousing.org/serv_loan.aspx	
Program Description	Makes loans to non-profit housing developers for projects in which conventional financing is not available or not affordable and promotes innovative and effective financing arrangements. Acquisition Loans, Technical Assistance, Predevelopment/Interim Finance/Rehab Loans	Program provides 10 and 15 year fully-amortizing loans. Long-Term Loans, Acquisition Loans, Technical Assistance
Type of Assistance		
Activities Funded	New Rental Housing New For-Sale Housing Rehab of Apartments Transitional Housing Infrastructure Development/Acquisition Preservation of Affordable Housing Mobile Home Park Purchase Assistance Group Homes/Congregate Care Single Room Occupancy (SRO) Hotels	Single Room Occupancy (SRO) Hotels Rehab of Apartments Human Service Facilities Acquisition Mobile Home Park Purchase Assistance New Rental Housing Community Facilities Public Works
Average Loan/Grant Amount	\$16,000,000.00 Minimum \$20,000. Average grant \$300,000	\$5,000,000.00
Loan Grant Details (if any)	Fund also sells loans on secondary market, allowing larger loan sizes of \$250,000 to \$8 million. In a letter, describe project, loan amount, term and interest rate desired, include pro forma, describe borrower and borrower's track record.	
Loan Interest	5.0 - 7.0%	Rate varies depending on market.
Match Funds Required	No	No
Who Can Apply	Cities with more than 50,000 population Cities with less than 50,000 population Counties Rural Communities Non-Profit Corporations Native American Tribes/Reservations Cooperative Corporations	Cities with less than 50,000 population Rural Communities Counties Non-Profit Corporations Cooperative Corporations Public Housing Agencies
Selection Criteria	Project residents must be low- or very low-income; long-term affordability; need for assistance; organizational capacity; soundness of pro forma; community support; security of loan.	70% Loan to value or less; 1st deed of trust; 1.10 debt service after reserves

Appendix

HFS Review of Funding Options & License Criteria

Laguna Honda Hospital Replacement Project Non-profit Funding Sources for Independent and Assisted Living Facilities

Foundations grants

Organization	Programs description	Contact details
Robert Wood Johnson Foundation		
Coming Home Project	Program to provide grant support, technical assistance, and loan funds to states to create affordable models of assisted living targeted to low-income seniors and linked with existing community health care systems	http://www.rwjf.org/applications/solicited/no.jsp?FUND_ID=54206
California Endowment Access to Health	Proposals eligible for funding include: supporting a capacity building project that will enable a small community clinic or health organization to more effectively provide health services, developing new models of care focusing on prevention and effective coordination of health and mental health services, or building a coalition across public and private sectors to expand access to health services for all Californians	http://www.calendow.org/grant_guide/index.htm
Building Capacities Program	The goal of this program is to help clinics strengthen and sustain their infrastructures so they are able to increase access to care, more effectively serve their patients and become more powerful change agents in their communities. Grants support capital expansion efforts for construction of new clinic facilities and building renovations	
Harvard University Ford Foundation Innovations in American Government	Innovative programs in areas such as neighborhood and community revitalization, housing, health care and social services, education and training, job creation and economic development, environmental protection, welfare	http://www.innovations.harvard.edu/
Home Depot Foundation Awards of excellence for affordable housing built responsibly	Home Depot Foundation is dedicated to creating healthy, livable communities through the integration of affordable housing built responsibly and the preservation and restoration of community trees. By supporting the building of affordable, efficient and healthy homes and the planting of community trees, the Foundation is working to increase awareness of the connection between quality affordable housing, adequate natural spaces and trees to the overall health and success of our communities	http://www.homedepotfoundation.org/
Local Initiatives Support Corporation (LISC)	Through LISC local program offices, we provide grant funding to assist organizations develop affordable housing, commercial and retail space, and community facilities, as well as other community development activities. Grants are designed and provided consistent with local program office strategies and local community development needs. Grants have typically come in the form of organizational development grants that assist community organizations to improve its administrative structures, management and financial systems, and real estate development and strategic planning grants to cover costs associated with the creation of new programs that are important to an organization's overall mission and needs of the community's residents; and management capacities; project grants to help cover costs associated with real estate development that further neighborhood	http://www.lisc.org/

Laguna Honda Hospital Replacement
Non-profit Funding Sources for Ind

	Predevelopment/Construction Loan Program	Revolving Loan Fund
Organization	Rural Community Assistance Corporation	Low-Income Housing Fund Northern California Oakland CA 94611 (510) 893-3810 Not-For-Profit
Address	2125 19th St	
City	Sacramento	
State	CA	
Zip	95818	
Phone	(916) 447-9832	
Organization Type	Not-For-Profit	
Website	www.rcac.org	
Program Description	A revolving loan fund making loans at below market rates to finance a multitude of activities related to general housing and community facility projects.	Provides financing for low-income housing and non-residential facilities at affordable rates and terms
Type of Assistance	Construction/Rehab Loans, Acquisition Loans, Technical Assistance, Predevelopment/Interim Finance	Construction/Rehab Loans, Long-term Loans, Predevelopment/Interim Finance, Technical Assistance, Acquisition Loans
Activities Funded	Human Service Facilities Single Room Occupancy (SRO) Hotels Acquisition Community Facilities Infrastructure Development New For-Sale Housing New Rental Housing Rehab of Apartments Rehab of Owner-Occupied Housing Also, site development	Human Service Facilities Acquisition Community Facilities Group Homes/Congregate Care New For-Sale Housing New Rental Housing Operation Administration Preservation of Affordable Housing Rehab of Apartments Rehab of Owner-Occupied Housing Single Room Occupancy (SRO) Hotels Also, LIHF's goal is to increase access to capital for low-income communities, primarily by providing financing for low-income housing and non-residential facilities. Also mini perms, refinancing loans, lines of credit and working capital loans \$40,000,000.00 Average grant amount \$200,000
Average Loan/Grant Amount	\$5,000,000.00 Minimum \$50,000. Average loan \$250,000. Max amount \$750,000.	Max amount \$5,000,000.00 Submit preliminary application; information concerning project and borrower, operating income, expense budget, environmental form and sources/uses of funds
Loan Grant Details (if any)		
Loan Interest	5.50%	5% for loan amounts of \$1 million and above, lower than \$1 million 4.75%
Match Funds Required	No	No
Who Can Apply	Cities with less than 50,000 population Rural Communities Counties Non-Profit Corporations Cooperative Corporations Public Housing Agencies	Cooperative Corporations Counties Native American Tribes/Reservations Non-Profit Corporations Public Housing Agencies Rural Communities
Selection Criteria		Financial and operational feasibility of project, long-term affordability. 51% of units must be affordable to low-income

Appendix

HFS Review of Funding Options & License Criteria

Laguna Honda Hospital Replacement Non-profit Funding Sources for Ind

Foundations grants

Organization

Robert Wood Johnson Foundation

Coming Home Project

California Endowment

Access to Health

Building Capacities Program

Harvard University

Ford Foundation Innovations in
American Government

Home Depot Foundation

Awards of excellence for affordable
housing built responsibly

Local Initiatives Support

Corporation (LISC)

Appendix

HFS Review of Funding Options & License Criteria

Medicare Home Health Care

Medicare Home Health Care Home health care consists of skilled nursing, therapy (physical, occupational, and speech) and certain related services including aide services furnished in a patient's home. Services are typically provided by registered nurses, therapists, social workers, and home health aides employed by a home health agency (HHA). These agencies can be freestanding or facility-based and classified as not-for-profit, proprietary, or governmental. Studies have suggested that most high users of home health care have long-term care needs. More than nine in ten high users have limitations in activities of daily living, and most have multiple, complex medical needs.

Medicare will pay for home health care only if it is reasonable and necessary for the treatment of a patient's illness or injury. In order to be eligible for the Medicare home health benefit, beneficiaries must be homebound and require intermittent skilled nursing or physical or speech therapy; he or she must also be under the care of a physician.

Qualifying for Home Health Care

To qualify for Medicare home health coverage, you must meet all four of the following conditions:

1. Your doctor must determine that you need medical care in your home and prepare a plan for your care at home.
2. The care you need must include intermittent (not full time) skilled nursing care, or physical therapy or speech language pathology services.
3. You must be homebound. This means you normally are unable to leave your home. If you do leave your home, it is with considerable and taxing effort. Absences from home must be infrequent, or of short duration, or to get medical care. You can still be considered homebound if you occasionally go to the barber or beauty shop or for a walk around the block or a short drive.
4. The home health agency serving you must be approved by the Medicare program.

What's Covered?

If you meet all four of the conditions to qualify for home health care, Medicare will pay for:

Skilled nursing care either on an intermittent or part-time basis. Skilled nursing includes services and care that can only be performed safely and effectively by a licensed nurse.

Home health aide services either on an intermittent or part-time basis. Home health aide services include assistance with personal care such as bathing, using the toilet, or dressing. These types of services do not require the skills of a licensed nurse.

Physical therapy as often and for as long as it is medically necessary and reasonable. Physical therapy includes exercise to restore movement and strength to an injured arm or leg, and training in getting into and out of a wheelchair or bathtub.

Speech language pathology as often and for as long as it is medically necessary and reasonable. This type of therapy includes exercises to restore speech.

Occupational therapy as often and for as long as it is medically necessary and reasonable, even if you no longer need other skilled care. Occupational therapy helps you to achieve independence in daily living by learning new techniques for eating, dressing and performing other routine tasks.

Medical social services to assess the social and emotional factors related to your illness, counseling based on this assessment, and searches for available community resources.

Medical supplies like wound dressings.

Medical equipment. Medicare pays 80 percent of the approved amount. An example of medical equipment would be a wheelchair or walker.

What's Not Covered?

Medicare does not cover the following:

24-hour care at home.

Self-administered prescription drugs.

Meals delivered to the home.

Homemaker services such as shopping, cleaning and laundry.

Personal care provided by home health aides, such as bathing, toileting, or providing help in getting dressed when this is the only care you need. Medicare classifies this as "custodial care" because it could be provided safely and reasonably by people without professional skills and training. Medicare does not pay for "custodial care" unless you are also getting skilled care such as nursing or therapy and the custodial care is related to the treatment of your illness or injury.

Appendix

HFS Review of Funding Options & License Criteria

Hospice Care in Assisted Living

What is Hospice Care?

Hospice care is designed for individuals who are terminally ill. Hospice care offers the dying patient the ability to remain in familiar surroundings, often with a greater sense of peace, comfort and dignity. As compared to home health care, hospice focuses less on treatment of illness, and more on the patient's comfort and emotional health at the end of life.

A team of many different healthcare personnel provides the hospice care. The team usually includes a physician, a nurse, a home health aide, a social worker, a chaplain and in some instances, a volunteer. This interdisciplinary hospice team works together to develop a plan of care that will help alleviate the patient's pain providing the necessary medications, medical supplies, and equipment.

Although hospice services can be extremely helpful, the decision to choose hospice care can be very difficult for a resident and his or her family. The decision to give up active treatment for the terminal illness is obviously influenced greatly by the patient's culture and religious beliefs. Hospice care is unique because it provides personalized care and services to patients and their families. The patient and family are assisted in the necessary preparation for death in a way that is appropriate for them.

Hospice Care in an Assisted Living Facility

Although hospice care often is thought of as something provided in the patient's home, hospice care also can be provided in an assisted living facility. Though a terminally ill resident may require care that ordinarily would require the resident to move to a nursing home, the goal of hospice care is to allow the resident to remain where they are most comfortable. Therefore, many states have special rules that allow assisted living residents to receive hospice care and remain in the facility, provided certain conditions are met. Since most hospice care is provided by outside hospice agencies, rather than the facility itself, these conditions usually require the facility and hospice agency to work together to provide the best possible end-of-life care.

Many states require assisted living facilities to obtain special permission for admitting or retaining residents in need of hospice care. Depending on the state, permission is granted for a particular resident or residents only, or for an entire facility.

If permission is granted for a particular resident, the facility must provide the state licensing agency with the appropriate information about the resident, including a service plan that details how hospice care will be provided. Generally the hospice agency and the assisted living facility at a minimum are required to have a written agreement that describes the responsibilities of each.

Hospice agency staff provides scheduled services and, in addition, usually is available twenty-four hours a day, seven days a week, to meet patients' unscheduled needs. Often, hospice staff trains the appropriate facility staff on how best to manage the resident's care between hospice visits. The hospice agency also may involve the resident's family and friends in the plan of care.

Hospice care should not replace anything that a facility otherwise is obligated to do. Instead, hospice services should supplement and improve upon the facility-provided services.

Paying for Hospice Care in Assisted Living

Hospice care is covered under Medicare, Medicaid, most private insurance plans, and other managed care organizations. However, most hospice care is paid for by Medicare Part A, and provided through Medicare-certified hospice agencies.

Medicare rules allow payment for hospice care only if a doctor has certified that the patient is expected to die within six months. If the patient in fact does not die within the six months, hospice care nonetheless can be continued indefinitely, as long as the doctor continues to certify that the resident is expected to die within the following six months.

By choosing the hospice service package, a patient gives up services related to the treatment of the terminal illness. When a Medicare beneficiary chooses hospice care, he or she is turning down Medicare reimbursement for active treatment of the terminal illness. However, a beneficiary still can use Medicare for other medical care.

Assume, for example, that a Medicare beneficiary has cancer that is likely to cause her death within six months. If she chooses the Medicare hospice benefit, Medicare will not pay for radiation or chemotherapy to combat the cancer. The hospice benefit, however, will pay for medication to suppress or manage the pain caused by the cancer, as well as the other items and services included in the Medicare hospice benefit.

Appendix

HFS Review of Funding Options & License Criteria

How long can hospice care continue?

Special benefit periods apply to hospice care. A Medicare beneficiary may elect to receive hospice care for two 90-day periods, followed by an unlimited number of 60-day periods. The benefit periods may be used consecutively or at intervals. Regardless of whether they are used one right after the other or at different times, the patient must be certified as terminally ill at the beginning of each period.

A patient who chooses hospice care may change hospice programs once each benefit period. A patient also has the right to cancel hospice care at any time and return to standard Medicare coverage, then later reelect the hospice benefit in the next benefit period. If a patient cancels during one of the first three benefit periods, any days left in that period are lost.

How is payment made?

Medicare pays the hospice directly at specified rates depending on the type of care given each day. The patient is responsible only for:

Drugs or biologicals: The hospice can charge 5 percent of the reasonable cost, up to a maximum of \$5, for each prescription for outpatient drugs or biologicals for pain relief and symptom management related to the terminal illness.

Inpatient Respite care: The hospice may periodically arrange for inpatient care for the patient to give temporary relief to the person who regularly provides care in the home. Respite care is limited each time to a stay of no more than 5 days. The charge (currently 5%), which is subject to change each year, varies slightly depending on the geographic area of the country.

Are other Medicare benefits available?

When Medicare beneficiaries choose hospice care, they give up the right to standard Medicare benefits only for treatment of the terminal illness. If the patient, who must have Part A in order to use the Medicare hospice benefit, also has Medicare Part B, he or she can use all appropriate Medicare Part A and Part B benefits for the treatment of health problems unrelated to the terminal illness. When standard benefits are used, the patient is responsible for Medicare's deductible and coinsurance amounts.

Long Term Care Insurance

Long-term care insurance is a special type of insurance plan that can help pay for assisted living. Long-term care insurance policies usually pay a certain sum of money to the facility for a certain period of time.

The cost of long-term care insurance varies widely depending on the policy. There are many different options to choose from, and the price often is determined by the age, medical condition and services needed by the resident applying for the policy. Usually, the younger the applicant is, the less expensive the policy. Many policies have set rates that do not increase as the insured ages. However, rates can change for other reasons, so there's no guarantee that the rate for coverage will remain constant.

Some individuals may not be eligible to purchase long-term care insurance. Residents already living in a long-term care facility, those who have already been diagnosed with a condition that will require long-term care, or those over age eighty five may not be eligible to purchase any type of long-term care policy.

Because claims under long-term care insurance may not be filed for a long time, applicants must thoroughly research and understand the exact terms of the policy, including the rules affecting when the policy actually takes effect. Principal dangers are that the insurer will no longer be in business when care is needed, or that the premium costs will increase dramatically between when the policy is purchased and when long-term care is needed.

Monthly SSI payment amounts

The Supplemental Security Income ("SSI") program guarantees a very limited income to individuals who are aged, blind and/or disabled, and who have available savings of no more than \$2,000. As is the case in determining Medicaid eligibility, "available savings" for SSI purposes does not include the value of the home, a necessary automobile, clothing, household goods, a burial plot, or other important items.

The federal SSI benefit rate is very low -- \$564 for 2004 -- so many states provide an additional state supplement for SSI recipients residing in assisted living facilities. Even with this state supplement, the total monthly income of SSI-eligible

Appendix

HFS Review of Funding Options & License Criteria

residents is extremely low. Since this total amount of income is so low, some states require that assisted living facilities accept a limited monthly rate from SSI-eligible residents, so that the resident can keep a small amount of money for personal needs. Residents apply for SSI benefits at the local Social Security Office. Eligibility depends on the resident's savings and income. The amounts include both federal and state payments combined. Not all SSI recipients receive the maximum amount. Payment may be lower if there is other income

Category	These payments include state supplement		
	Aged	Disabled	Blind
<i>Single people</i>			
Independent living status	\$856.00	\$856.00	\$921.00
Non-medical board and care	\$1,035.00	\$1,035.00	\$1,035.00
Independent living status, no cooking facilities	\$940.00	\$940.00	
Living in the household of someone else	\$649.34	\$649.34	\$730.34
Disabled minor child		\$742.00	
Disabled minor child in household of another		\$523.34	
<i>Aged or disabled couples</i>			
Independent living status	\$1,502.00		
Non-medical board and care	\$2,070.00		
Independent living status, no cooking facilities	\$1,670.00		
Living in the household of someone else	\$1,218.33		
<i>Blind couples</i>			
Independent living status			\$1,729.00
Living in the household of someone else			\$1,445.33
<i>Blind person with an aged or disabled spouse</i>			
Independent living status			\$1,644.00
Living in the household of someone else			\$1,359.33

Appendix

HFS Review of Funding Options & License Criteria

Residential Care for the Elderly (RCFE) Regulations for the State of California (Title 22, Div 6, Art 6)

Basic services are those services that are required to be provided to receive and maintain a license.

All basic services must be listed in the admission agreement
At a minimum, they must include:

- 1 Safe and healthy living accommodation, including house keeping and laundry services.
No mandated number of staff
- 2 Three nutritionally well-balanced meals
A written menu need to be prepared a week in advance and copies available to residents In facilities of 50+, there must be a qualified employee to supervise the operation of the food service. If this person is not a nutritionist, dietician or home economist, there need to be regular consultation from a qualified person
No other mandated number of staff
- 3 Snacks must be available daily, including diet restricted, low salt or other medically directed necessity
- 4 Personal assistance and care such as bathing, dressing, grooming and assistance with medications
No mandated number of staff
There are training requirements for the caregivers, according to the services provided
It is also recommended that a full-time RN is hired and available (on-call is accepted)
- 5 Regular observation of the resident's physical and mental condition
A physician is required to assess the residents at admission and on a regular basis.
- 6 Arrangements to meet health needs
Transportation needs to be available for residents to seek medical and dental care
Ability to separate residents whose illnesses require separation from others
Staff must be able to assist with prosthetic devices, vision and hearing aids

Staff must be trained to assist residents with self-administration of medication. Extra training is required for carers

An RN will be required to provide specific services such as diabetes testing, injections etc.

- 7 A planned activity program appropriate to the interests and capabilities of the residents
In facilities of 50+, there will be one staff member with full-time responsibility for planned activities
Volunteers may be used under the direction of the employed staff
The plan of activities must be planned and written in advance and made available to all residents
No mandated number of staff, but DSS has the right to enforce additional staffing if the needs of the residents are not met
Please see next tab for DSS expectations for planned activities
- 8 24-7 supervision
Day shift will be covered by regular employed staff
Night shift (10pm-6am) in facilities that care for 100 to 200 residents, one employee will be on call on the premises, one employee will be on duty on the premises and awake and one employee will be on call and available to respond within 10 minutes
For 200+, one extra staff person on duty and awake on the premises will be required for every 100 additional residents

Following my conversation with DSS, they told me that they offers no recommendation on staffing ratio other than the standard requirements mentioned in Division 6 of Title 22 that I have summarized above. I was told that they are able to enforce higher staffing levels if they visit the facility and feel that there is a need. This applies particularly to larger facilities.

Appendix

Structural Narratives for Option A

SEISMIC EVALUATION AND REHABILITATION

OF

LAGUNA HONDA HOSPITAL

BUILDINGS 2 & 3 – WARDS K, L, M & O

AS PART OF THE

Laguna Honda Hospital Replacement Program

Senior Housing Feasibility Study



Prepared for

City of San Francisco

Department of Public Health

Prepared by

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F/E JOB NUMBER: 00-080.030

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TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY.....	1
2.	EVALUATION PROCEDURE AND CRITERIA.....	5
3.	DOCUMENTATION REVIEWED.....	6
	A. Drawings.....	6
	B. Report.....	6
4.	BUILDING DESCRIPTION.....	8
	A. Site and Building Configuration.....	8
	B. Gravity System.....	9
	C. Lateral Force Resisting System.....	10
5.	TIER 1 EVALUATION.....	12
	A. Ground Motion and Base Shear.....	12
	B. Structural and Foundation Checklist Deficiencies.....	12
	C. Non-Structural Checklist Deficiencies.....	13
6.	TIER 2 EVALUATION.....	14
	A. Explanation of Tier 2 Objective.....	14
	B. Tier 2 Analysis.....	14
7.	ANTICIPATED SEISMIC PERFORMANCE.....	17
8.	RECOMMENDATION FOR STRUCTURAL REHABILITATION.....	18
	A. Non-Seismic.....	18
	B. Seismic.....	19
	REFERENCES.....	20

Appendix

Structural Narratives for Option A

EXECUTIVE SUMMARY

As part of the Senior Housing Feasibility Study a seismic evaluation of existing Buildings 2 and 3 has been performed, and the results are presented herein. The goal of this study is to identify any structural deficiencies for the as-is condition, and then recommend a seismic rehabilitation strategy that would be augmented with the structural scope of work associated with the senior housing facility development of the buildings. The development includes removing the northern end of the two buildings and providing new nonstructural systems and finishes; hence a seismic evaluation of the existing nonstructural systems was not performed. A narrative describing the structural changes associated with the development is provided within the report.

The design and construction of this infrastructure development will occur after January 2008 and is NOT under the jurisdiction of the Office of Statewide Health Planning and Development, hence the governing code, City and County of San Francisco Building Code, will be based on the California Code of Regulations, Title 24, 2007 edition, (commonly referred to as the 2007 California Building Code) which in turn is based on the International Building Code (model code), 2006 edition and various national standards. There are significant changes proposed to the incoming CBC, particularly Chapter 34, the existing buildings chapter, which will likely be in effect at the time of this project design. Local jurisdiction, state and national code changes will inevitably result in the adoption of the national standard ASCE/SE 41-07, Seismic Rehabilitation of Existing Buildings, which, therefore, is what the seismic rehabilitation recommendations herein are based on.

The structural seismic evaluation of the as-is condition was conducted using the ASCE 31-03 Standard, "American Society of Civil Engineers – Seismic Evaluation of Existing Buildings", with "Life Safety" as the performance objective. The structural evaluation is based on review of original building design drawings obtained from Laguna Honda Hospital, and on a walk-through investigation by Forell/Elsesser Engineers.

Building 2 (Wards K and L) and Building 3 (Wards M and O) are very similar in plan with a gross floor area of about 90,000 square feet, but Building 3, which is located to the east of Building 2, is approximately 30 feet longer in north-south direction, and has two towers and two transverse shear walls instead of the four towers. The buildings were built in 1930 and 1938, respectively. The original connector building between Buildings 1 and 2, built at the same time as Building 2, had two stories, but three more stories were added in the upgrade done in about 1957. A similar expansion was done at the connector building between Buildings 2 and 3.

Due to the differences between the two buildings and the fact that the connecting structure between the two buildings is isolated from Building 2, a separate evaluation was performed for each of the two buildings and our results of these evaluations follow. The results considered the global, entire building response, and then local responses of specific members such as columns adjacent to the drive through aisles beneath the connector buildings.

The buildings' global evaluation in the longitudinal (north-south) direction determined that the Life Safety performance object is readily obtained. Both buildings have long exterior shear walls, thus providing a robust lateral-force-resisting system in that direction.

In addition to the number of towers differences between the buildings, there is a significant difference in the number and size of concrete wall penetrations in the transverse (east-west) direction. This resulted in different conclusions for each building in this direction.

Building 2 has larger opening in the walls located adjacent to the towers, and results in overstress of these walls and, consequently, the nearby tower walls. There will also be localized concrete slab damage where the tower connects to the building. This wall overstress and likely damage state results in the performance objective of Life Safety not being obtained for Building 2.

The two towers of Building 3 buttress the building and the transverse walls have limited openings. This provides a well-distributed and inherently redundant lateral-force-resisting

Appendix

Structural Narratives for Option A

system. Due to these attributes, Building 3 in the transverse meets the Life Safety performance objective.

In addition to the global issues discussed above, both buildings were evaluated for potential local seismic deficiencies. They were found to have isolated locations where their seismic performance is marginal but still meeting the Life Safety performance objective. These occur at the drive-through areas on the ground floor of the connector buildings; which consist of structural discontinuities, such as walls being supported by columns. Further, and as identified with Building 2, the building to tower connection through the concrete slab and beam are locations where high stress is likely. While we do not believe this will compromise a Life Safety performance level rating, a responsive seismic rehabilitation should include strength augmentation of these elements where it can be readily done without compromise to building functional.

The seismic rehabilitation scope for these buildings to achieve a Life Safe performance level consists of 1) selective infilling of existing transverse concrete wall openings, particularly those in Building 2 and for both buildings where the towers connect to the building, 2) steel jacketing of columns at the connector buildings drive through, and 3) concrete slab strengthening where the towers connect to the buildings.

Based on the geotechnical report for the new skilled nursing facility, there is a low potential liquefaction or other significant geohazard risk at the site.

We note that should the programming change and require the building to be under the OSHPD jurisdiction, seismic rehabilitation would be very onerous because of the poor detailing of the existing reinforced concrete elements. Although a cost assessment has not been performed for this scenario, it is judged that seismic rehabilitation to meet OSHPD's performance objective would be cost prohibitive.

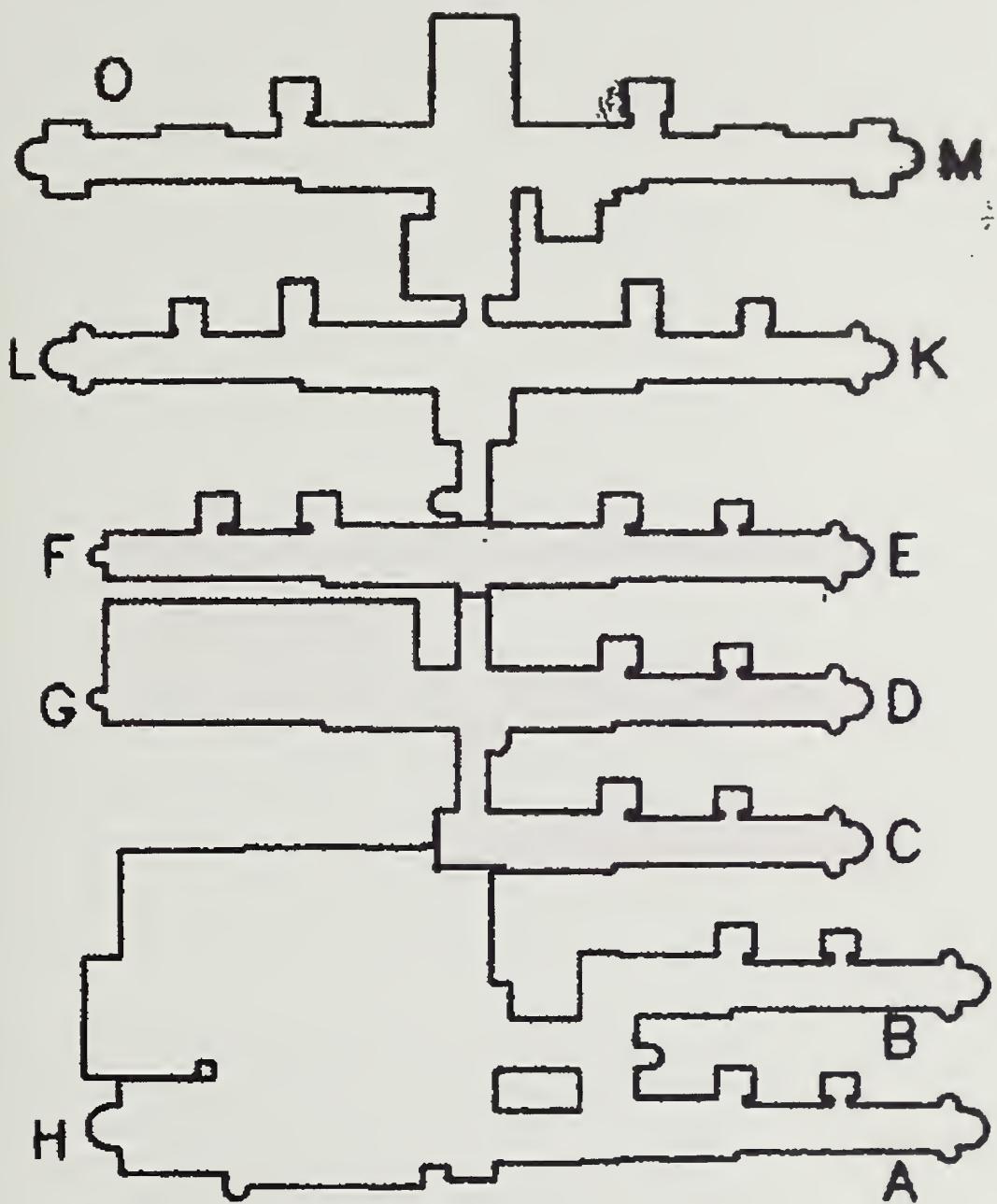


Figure ES-1. Key Plan

Appendix

Structural Narratives for Option A

EVALUATION PROCEDURE AND CRITERIA

The design and construction of this infrastructure development will occur after January 2008 and is not under the jurisdiction of the Office of Statewide Health Planning and Development, hence the governing code, City and County of San Francisco Building Code (SFBC), will be based on the California Code of Regulations, Title 24, 2007 edition, (commonly referred to as the 2007 California Building Code) which in turn is based on the International Building Code (model code), 2006 edition and various national standards. There are significant changes proposed to the incoming CBC, particularly Chapter 34, the existing buildings chapter, which will likely be in effect at the time of this project design. Local jurisdiction, state and national code changes will inevitably result in the adoption of the national standard ASCE/SE 41-07, Seismic Rehabilitation of Existing Buildings, which, therefore, is what the seismic rehabilitation recommendations herein are based on.

This report summarizes a Tier 1 and Tier 2 seismic evaluation of Buildings 2 and 3, conducted in accordance with ASCE 31-03, Seismic Evaluation of Existing Buildings, and consists of an ASCE 31 Tier 1 checklist evaluation of both buildings. ASCE 31 is a seismic evaluation standard that replaces FEMA-310, Handbook for the Seismic Evaluation of Buildings – a Prestandard. Significant deficiencies identified by the Tier 1 checklists are studied in more detail using the provisions of an ASCE 31 Tier 2 analysis.

The present evaluation assumes that the desired performance level of both buildings is categorized as “Life Safe” with respect to seismic performance, which is consistent with the SFBC intent. We have therefore used the ASCE 31 guidelines to evaluate the building for Life-Safe performance level.

The intent is to rehabilitate the existing finger wards to house a new senior living facility. The development includes removing the northern end of the two buildings (Wards L and O) and providing new nonstructural systems and finishes. The existing furnishes and all building systems will be removed. Extensive architectural treatment and modernized building systems are part of the rehabilitation. This study, therefore, is on the structure not the existing architectural components and nonstructural systems.

1. DOCUMENTATION REVIEWED

A. Drawings

The following drawing sets were made available to Forell/Elsesser Engineers to perform the evaluation of Buildings 2 and 3.

- i. Architectural drawings for Building 2, dated August 6, 1930, 14 sheets.
- ii. Structural drawings for Building 2, dated August 6, 1930, 7 sheets, S2 to S8.
- iii. Architectural drawings for Building 3, dated July 1, 1938, 6 sheets.
- iv. Structural drawings for Building 3, dated July 1, 1938, 9 sheets, S1 to S9.
- v. Architectural drawings for upgrade of the connector building between Buildings 2 and 3, dated October 11, 1957, 2 sheets.
- vi. Structural drawings for upgrade of the connector building between Buildings 2 and 3, dated October 11, 1957, 10 sheets, S1 to S10.

B. Report

The report on Seismic Assessment of Building Laguna Honda Hospital Main Hospital Buildings 1, 2, 3 by SOH & Associates was submitted to The Office of Capital Resource Management, Department of Public Works, City & County of San Francisco in October 1992. This document was reviewed by Forell/Elsesser Engineers but the conclusions reflected in the present report were made independently from the 1992 seismic assessment report.

The 1992 report covers the seismic assessment of all three buildings, but the scope of the present study is limited to Buildings 2 & 3; therefore, the summary only presents these two buildings. The 1992 report concludes that the buildings do not meet acceptable Life Safety standards based on BSSCNH criteria and are deficient in their ability to resist the seismic force level prescribed in the BSSCNH requirements. The

Appendix

Structural Narratives for Option A

buildings were assigned a Seismic Hazard Rating of 3 (Major Damage, Poor Performance) based on the City of San Francisco Seismic Hazard Ratings. The structural deficiencies were reported as, 1) insufficient shear capacity in existing transverse reinforced concrete shear walls, 2) unstable sanitary towers under lateral loading because of inadequate connections to the main ward structures, and 3) inadequacy of an existing seismic joint between the corridor structure and the ward buildings to transfer shear to transverse shear walls. A list of noncompliant nonstructural components is also presented in the 1992 report, which is not of importance due to the assumption of removing all nonstructural components in all the recommended options for future rehabilitation.

The 1992 report recommends thickening the existing transverse reinforced concrete shear walls in the lower stories, strengthening coupling beams above doorways, adding up to eight drilled piers per Ward Building to resist overturning, and also adding collectors to strengthen the connection between the Sanitary towers and the Ward Buildings. The proposed strengthening scheme was to meet the requirements of the 1991 UBC with an Importance Factor of 1.25 as Occupancy Class C (Essential) based on the Minimum Strengthening Design Standards by San Francisco Department of Public works.

2. BUILDING DESCRIPTION

A. Site and Building Configuration

Buildings 2 and 3 are very similar in plan, but Building 3 is approximately 30 feet longer in north-south direction, and has two towers instead of the four towers of Building 2. Considering the differences between the two buildings and the fact that the connector building is isolated from Building 2 all along its height, but is connected to Building 3 at 1st and 2nd floors, the decision was made that a separate evaluation should be performed for each of the two buildings.

Building 2, which consists of Wards K and L, the core area, four towers, two solaria, and the connecting section between Buildings 1 and 2, built in 1930, is almost rectangular shape in plan with overall dimensions of 473 feet in north-south (longitudinal) direction and 37 feet in east-west (transverse) direction. Building 2 is approximately 58 feet tall with five stories in all areas but the penthouse covering part of the core area, which is 75.5 feet tall, and at the two towers next to the core area (Towers 2 and 3), which are 80.5 feet tall. The building has four staircases, one at each north and south ends, and two at the core area. The four towers are utility towers. Towers 2 and 3 each support a utility tank at 70.5 feet above the ground level. The original connector building between Buildings 1 and 2, built at the same time as Building 2, had two stories, but three more stories were added in the upgrade done in about 1957; therefore, the existing connector building has five stories, which are all aligned with the floors of Building 2. The building houses approximately 87,000 gross square feet of floor area and has approximately 22,000 gross square feet at roof.

Building 3, which consists of Wards M and O, the core area, two towers, two solaria, and the connecting section between Buildings 2 and 3, built in 1938, is almost rectangular shape in plan with overall dimensions of 503 feet in north-south (longitudinal) direction by 37 feet in east-west (transverse) direction, and is approximately 58 feet tall with five stories in all areas but the penthouse covering part of the core area, which is 69.5 feet tall. The building has three staircases, one at each

Appendix

Structural Narratives for Option A

north and south sides, and one in the core area. The two towers were used as lavatory. The original connector building built at the same time as Building 3, had two stories, but three stories were added in the upgrade done in 1957; therefore, the existing connector building has five stories, which are all aligned with the floors of Building 3. The building houses approximately 93,800 gross square feet of floor area and has approximately 23,000 gross square feet at roof. The main entrance is located on the east side.

Overall, the structure of the facility appeared to be in good condition where observations were made.

The building is located on a sloped site, where the ground slopes down from the two wards toward the core area. The soil is classified as S_c for the Laguna Honda site.

B. Gravity System

Building 2 has a gravity system, which is made of one-way slabs and beams supported on reinforced concrete columns and bearing walls. The columns are between 10 to 21 inch squares sections. Either closely spaced ties or spirals with a maximum $2\frac{1}{2}$ -inch pitch provide columns confinement. The tied columns have stirrups at 3 inch at the top and bottom 1.5 feet of their length and at 4 inch elsewhere. The spirals are anchored by two complete turns at the bottom of the columns and are hooked to a vertical bar. The splice length is 3.5 feet for all columns, which satisfied the Life Safety performance requirement of $35d_b$. The foundation sheet of structural drawings was missing and no details were found. No drawings were found for the upgrade done on the connector building between Buildings 1 and 2, when three stories were added to this connecting portion.

The gravity system for Building 3 consists of reinforced concrete bearing walls and columns as vertical elements and reinforced concrete beams and a combination of one-way and two-way slabs acting as horizontal elements. The columns of Building 3 are typically 16 inch by 16 inch. The connecting building had the same typical column shape but during the upgrade in 1957, these columns are strengthened to resist the additional load from the three added stories. The strengthening is done by

adding 10½ inch by 16 inch or 12 inch by 16 inch new columns to the existing columns by using building paper to make the two sections act as independent columns. Reinforced concrete walls and columns are supported on reinforced concrete spread footings. Column footings are typically 4 feet to 4 feet 6 inch square. The slab thickness varies between 4 inch to 7 inch depending on the span and the edge support condition.

At the connector building between Building 2 and Building 3, the gravity loads from the three floors added in 1957 are carried by a one-way 3-inch thick reinforced concrete slab on reinforced concrete joists, supported by reinforced concrete beams and columns at each floor. The joists are spaced at 36 inches at all floors and roof.

The strength of concrete is specified as 2,000 psi. Reinforcing steel has yield strength of 33 ksi.

C. Lateral Force Resisting System

Reinforced concrete bearing walls form the primary lateral-force-resisting system of Buildings 2 and 3 in both directions. The longitudinal walls are located on the perimeter of the building with many openings. The transverse walls are distributed along the length of the building with a maximum spacing of approximately 118 feet for both buildings. All exterior reinforced concrete shear walls are 12 in thick. Some interior shear walls are 10 in thick, for example the staircase walls of Building 3.

Shear walls of Building 2, which are 10 inch or thicker, are reinforced with two layers placed with 1½ inch cover and each layer consists of ½ inch square vertical bars spaced at 16 inches and 3/8 inch diameter horizontal bars spaced at 9 inches. All ties are open with 90-degree hook.

The walls of Building 3 are reinforced with ½ inch diameter bars spaced at 12 inches in both directions and at each face of wall. The original drawings specify steel reinforcement general details, which are adequate based on the current code requirements, e.g. the 90-degree hook and 180-degree hook have $14d_b$ and $8d_b$ development length requirements, respectively, the splice length is called out for $50d_b$ everywhere and $30d_b$ for columns,

Appendix

Structural Narratives for Option A

and closed 135-degree hooks are used to form stirrups.

Both Buildings 2 and 3 have reinforced concrete slabs with different thicknesses to act as the diaphragm of the lateral-load-resisting system of the buildings.

Both Buildings 2 and 3 are classified as building TYPE C2, Concrete Shear Wall with Stiff Diaphragms, in accordance with the ASCE 31 Guidelines, for the Tier 1 evaluation.

3. TIER 1 EVALUATION

A. Ground Motion and Base Shear

ASCE 31 suggests two methods to obtain spectral acceleration, mapped spectral acceleration or site-specific response spectrum. Both buildings evaluations are based on spectral accelerations determined using the site-specific response spectrum that was developed for the new hospital project¹. The site-specific response acceleration values for the building site at the short and one-second period are 1.5 g and 0.96 g, respectively. The site-specific spectral acceleration at the period of interest is greater than 70% of the mapped spectral acceleration, which is required by ASCE 31. The mapped spectral acceleration is obtained for the site coordinates, latitude of 37.7478 degrees and longitude of -122.4550 degrees, from USGS website. Based on a site soil Classification "C", the soil site coefficients at the short and one-second period are $F_a = 1.0$ and $F_v = 1.3$, respectively. Figure 1 illustrates the response spectra from both methods.

When calculated in accordance with the generic equation of ASCE 31 (ASCE 31 Section 3.5.2.4), the building period is approximately 0.4 seconds. Based on this period, the spectral acceleration is at the peak value of 1.0 g, and the pseudo-lateral force for evaluating the building is equal to the seismic weight of each building.

B. Structural and Foundation Checklist Deficiencies

Refer to Appendix C for the ASCE Tier 1 checklists including Concrete Shear Wall with Stiff Diaphragms (Building Type C2) structural checklists 3.7.9 and 3.7.9S, and Geologic Site Hazards and Foundations Checklist 3.8. The noncompliant Tier 1 items are listed below.

- Shear Stress Check:
 - Building 2: Tier 1 evaluation shows that walls 1, 2, and 3 are overstressed with demand-capacity ratios

¹ Seismic Hazard Analysis and Development of Design Spectra for Laguna Honda Hospital Project, dated February 2002, by URS Corporation.

Appendix

Structural Narratives for Option A

of 1.30, 4.45, and 1.59, respectively. Refer to Figure 2 for wall locations.

- Building 3: Based on the Tier 1 evaluation, walls 2, 4, and 5 are overstressed with demand-capacity ratios of 1.33, 2.06, and 1.70, respectively. Refer to Figure 2 for wall locations.

The Tier 1 evaluation uses a nominal 100 psi shear capacity to simplify the shear check process; Tier 2 evaluation is performed to obtain a more accurate estimate of both the capacity of the walls including the effect of reinforcement and the demand imposed by seismic loading by modifying the m factor.

- Overturning:
 - Building 2: Walls 1, 2, 6, 7, 8, C, and D have length-to-height ratios less than $0.6S_a$; therefore, a Tier 2 evaluation is required to estimate the overturning response. This assessment is based on a wall length that is equal to the building width. As reflected with the quick shear check, the wall openings cause structural component overstress and more a moment-resisting frame action than a shear wall mechanism. The weak link in this line of resistance, therefore, is the frame, not foundation overturning.
 - Building 3: Wall 4 has a length-to-height ratio of 0.35, which is less than $0.6S_a$; therefore, Tier 2 evaluation is required to clarify the adequacy of the wall against overturning moments imposed by seismic loading.

C. Non-Structural Checklist Deficiencies

As discussed above, see EVALUATION PROCEDURE AND CRITERIA, non-structural checklists are excluded from this evaluation as all the architectural and building systems are to be replaced as part of the building rehabilitation.

4. TIER 2 EVALUATION

A. Explanation of Tier 2 Objective

The Tier 1 evaluation identified deficiencies that could present a life safety hazard. The Tier 2 evaluation is intended to study these deficient elements in more detail. Based on ASCE 31, Table 3-3, a Full-Building Tier 2 Analysis and evaluation is not required for this building. Therefore, a “Deficiency-Only” Tier 2 evaluation is necessary. The Linear Static Procedure is applicable as the building is neither taller than 100 feet nor has mass, stiffness, or geometry irregularities based on Tier 1 evaluation results.

B. Tier 2 Analysis

- Shear Stress Check

Tier 1 evaluation does not predict the behavior and strength of the shear walls accurately; therefore, Tier 2 evaluation should investigate the behavior of the shear walls based on a more detailed approach. The demand is modified by using a modified m factor based on the wall geometry and axial demand to categorize its behavior as shear-controlled or flexure-controlled. The capacity of the shear walls is calculated by accounting for both the concrete and steel contribution. Then, the shear walls are evaluated to determine whether they are capable of transferring the shear forces to the foundation system of the building.

To evaluate the shear walls adequacy based on ASCE 31 Linear Static Procedure (LSP), the first step is to compute the pseudo-lateral force in accordance with Section 3.5.2.1, which is calculated in Tier 1. The pseudo-lateral force is distributed vertically in accordance with Section 4.2.2.1.3. Based on Tier 1 evaluation, the effect of torsion on the behavior of the structure is insignificant.

Based on ASCE 31 Table C4-1, the shear walls flexural and shear behavior is assumed as a Deformation-Controlled Action. Based on ASCE 31 Section 4.2.4.4, the component strength shall be taken as the expected strength, Q_{CE} , for

Appendix

Structural Narratives for Option A

deformation-controlled actions, which shall be assumed equal to the nominal strength multiplied by 1.25.

- Building 2: Walls 2 and 3 are overstressed in the transverse direction based on Tier 2 evaluation with demand-capacity ratios of 2.96 and 1.16, respectively. With an adequate connection between Towers 2 and 3, and the main building, local shear check for tower walls and wall 2 has an aggregate 18% overstress ratio. This level of overstress is considered marginal and would likely be compliant with a Tier 3 evaluation, a nonlinear analysis procedure.
- Building 3: The assumption in the evaluation process is that the towers are fully connected to the main building. To verify that assumption, the diaphragm section between the two parts is checked for the tension demand from the lateral load due to the weight of the tower. The reinforcement is detailed with adequate development length between the two parts and their area is sufficient to resist the tensile force due to seismic demand on the section. Based on the Tier 2 evaluation assumptions, all noncompliant transverse shear walls from Tier 1 evaluation resist the imposed seismic loads adequately, and are therefore compliant.
- Overturning Check
 - Building 2: The overturning Tier 2 evaluation for Tier 1 noncompliant walls determined that the foundation adequately resist the overturning moments applied by lateral forces.
 - Building 3: The overturning Tier 2 evaluation for Wall 4 determined that the foundation adequately resist the overturning moments applied by lateral forces.
- Diaphragm Check
 - Building 2: The connection between towers 2 & 3 to wards L & K is evaluated to ensure the connection between the towers and the wards is adequate under seismic transverse loading. The reinforcement in the slab, when considered as a force-controlled action, is not adequate to resist the tensile demand at the roof diaphragm level with demand-capacity ratio of approximately 2.3. However, when the connection is considered as a deformation-controlled action the 2.3 is considered acceptable.
 - Building 3: A Tier 2 diaphragm evaluation is performed to check the adequacy of the reinforced concrete slab spanning between walls 2 and 4 of Building 3. The

diaphragm is adequate in shear. Also, the reinforcement connecting the tower to the wards is checked for the tensile demand imposed at diaphragm level. The slab longitudinal and trim reinforcement along the edge of the slab are sufficient to resist the tensile demand at an essentially elastic level.

Appendix

Structural Narratives for Option A

5. ANTICIPATED SEISMIC PERFORMANCE

Building 2 does not satisfy Life Safety performance level requirements based on ASCE 31 evaluation process. The structure during a major level of earthquake loading, defined as an event with a mean return period of about 500 years, will likely have significant damage to the shear walls, particularly where the towers connect to the building, and above and below the openings in the transverse walls. This damage level is slightly more than that anticipate for a Life Safety performance level, as indicated by the marginal, 20%, level of overstress.

Based on ASCE 31 Tier 1 and Tier 2 evaluations of Building 3, it satisfies the requirements for Life-Safe performance level, except for the columns at the drive through aisle location of the connector building. We also expect structurally significant shear wall damage in transverse direction to occur, particularly above and below the wall openings and where the towers connect to the building. However this damage is within the performance range of Life Safety.

6. RECOMMENDATION FOR STRUCTURAL REHABILITATION

A. Non-Seismic

As part of the senior living development, the existing northern portions of the wings at wards L and O will be demolished. This area will be used as on-grade parking. The north ends of the remaining portions of Wings L and O will be closed off with a 12 to 14 inch thick reinforced concrete wall with openings, which will supplement the existing lateral strength at this location. A shallow strip footing will support the wall.

The non-conforming stairs at the south ends of Wings K and M will be removed and infilled with floor slab consisting of normal weight concrete over a steel deck, which in turn will be supported by steel beams spanning to existing walls. The exterior wall openings in these stairs will be infilled with reinforced concrete. The infills will have two layers of reinforcement and one row of drill and grout dowels into the existing concrete on four sides.

New enclosed corridors will be built outside of the west sides of the narrow sections of Wings K and M. New exit stairs will be added at each end of the four wings. This construction would likely consist of steel framing supported on shallow isolated concrete footings. The framing would support lightweight concrete atop of steel deck. The stair will consist of structural steel framing and concrete fill in steel pans to form landings and treads.

Doors into resident units from the new enclosed corridors will be created by cutting out the walls below existing window openings. Existing windows in the wall between resident units and the new enclosed corridors will have the windows removed and the openings filled with reinforced concrete, where improved earthquake performance results.

A new one-story addition to the south of the connector will contain the child care center. This will be made integral with both buildings. A new one-story addition to the north of the

Appendix

Structural Narratives for Option A

connector will provide space for a three-bay loading dock between the two north wings. A new one-story addition to the west of the connector will contain a small lobby and building security post. These will be formed from structural steel and light gage cold form steel, and be supported by shallow concrete foundations.

These changes have not been considered in the existing building seismic evaluation, but have been considered in the determination of the seismic rehabilitation scope recommended herein (see Figure 3).

B. Seismic

The seismic rehabilitation of Building 2 to meet a Life Safety performance objective consist of the following components:

- i. Provide reinforced concrete infill at selective wall opening locations. The infill consists of two layers of reinforcement with a single row of drill and grout dowels into the existing sill, jamb and header. The infill thickness will match existing conditions, which is typically about 12 inches. See Figure 3 for indicative locations. Note that the final infill locations will need to be coordinated with the architect and other disciplines.
- ii. Where the towers connect to the building, either infill as above (see Item i.) or augment the connection strength by the addition of reinforced concrete beams (Total 2 per tower), nominally 2 feet deep by 1 foot 6 inches wide, at the roof level. These would span one-bay in the transverse direction of the building and be dowled to the existing concrete roof.
- iii. Provide structural steel or fiber reinforced polymer jackets around the columns at the drive through location. The jackets, like those used for bridge construction, enhance the ductility, the ability for the column to deform laterally.

Although Building 3 meets the performance objective with the exception of the localized issue of the columns located at the drive through of the connector building, we recommend that selective shear wall openings be infilled, similar to that discussed with Building 2. Indicative locations are shown on

Figure 3. To address the potential localized seismic deficiency of the column, jacket the columns as is recommended for Building 2.

For both buildings, concrete shear walls will be used to close the building ends where the narrow wings are demolished. These walls will be used to provide lateral resistance and the above seismic rehabilitation scope includes their effect.

REFERENCES

1. ASCE/SEI 31-03 "Seismic Evaluation of Existing Buildings", 2003.
2. Structural calculations for "Laguna Honda Hospital, Buildings 2 & 3 – Wards K, L, M, & O", July 2007.

Appendix

Structural Narratives for Option A



Photo 1. View of South Side of Connector Building Between Buildings 2 and 3



Photo 2. Partial View of West Side of Building 3, Ward M



Photo 3. Partial View of West Side of Building 3, Ward M

Appendix

Structural Narratives for Option A



Photo 4. West View of Stair Area and Solarium at the South of Building 3



Photo 5. South View of the Connector Building Between Buildings 1 and 2

Appendix

Structural Narratives for Option A



Photo 6. Partial West View of Building 2, Ward K

APPENDIX B

FIGURES

Appendix

Structural Narratives for Option A

APPENDIX B

FIGURES

Appendix

Structural Narratives for Option A

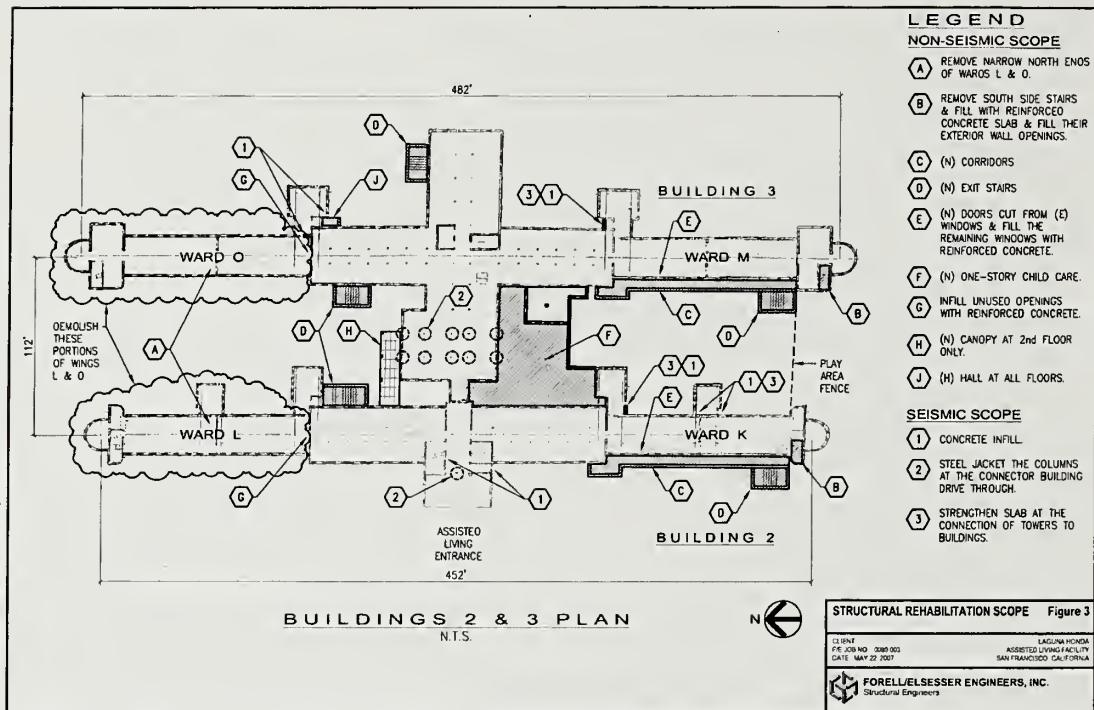


Figure 3. Buildings 2 and 3 Plan

Appendix

Structural Narratives for Options B, C, D, and E

Assisted Living Study

New Building Option "B"

Option "B" consists of a new four-story building at the site of the existing Buildings 2 and 3, and would be designed and built to the requirements of the City and County of San Francisco Building Code with an Occupancy Category III (Importance Factor, I, of 1.25). It will not be under the OSHPD jurisdiction. The west half of the new building is envisaged to have a daylighting basement due to the topography of the site. The structural system described below addresses the issues of the site's high seismicity and topography, the 10-foot floor-to-floor height limit and the footprint configuration. Because of the 10-foot floor-to-floor height limit and the residential function, we recommend a structural system composed of flat plate concrete slabs with concrete shear wall cores that would also form the elevator shafts and stairwells. The wings of the proposed new building will likely require supplement lateral resisting elements at their ends, these would consist of shear walls located between apartments and along corridors.

The floor and flat roof systems would consist of 10 to 12-inch thick post-tensioned concrete slabs. No fireproofing of the underside of the deck is necessary to obtain the required two-hour fire rating for the floor. The cast-in-place reinforced concrete shear walls forming the elevator shafts and stairwells would be 14 to 18-inches thick, as would the wall elements located at selective locations along the wings of the building. Based on the geotechnical recommendations for the LHRP, the building would be supported on an approximately three-foot thick mat slab. The footing is assumed to bear on Colma formations, dense to very dense Colma sands (8 to 10 ksf bearing capacity). Should the subsurface material consist of dune sand (significantly less competent than Colma sand) then the foundation scope may involve excavation and backfill with engineered material. The actual subsurface conditions should be evaluated and design recommendations provided by a geotechnical engineer in a subsequent design phase. A topping slab over the mat would be used.

A full story-height retaining wall in the north-south direction with return walls for the width of one wing will form the basement.

During the schematic design phase other structural materials and systems, such as structural steel with concrete fill on steel deck, pre-cast and tilt-up concrete with topping slab, light-

gauge cold-formed framing with topping slab, ConnXtech, etc., should be considered. Factors such as site access, market place conditions, sole source, site-specific soil conditions, structure weight, architectural flexibility, etc. will need to be considered with each system.

New Building Option "C"

Option "C" consists of using the seven-story West Residence Building (WRB), as designed and OSHPD approved. The building would be under OSHPD jurisdiction and would receive the level of construction inspection as said jurisdiction mandates. The change orders done for the East Residence Building would need to be done for the new building prior to construction. In brief, the structural system for this building consists of 3-1/4-inch thick lightweight concrete over 3 inch composite steel deck, spanning to standard rolled-section steel beams, girders and columns. No fireproofing of the underside of the deck is necessary to obtain the required two-hour fire rating for the floor. The steel frame will require sprayed fireproofing for ratings required for Type 1 buildings. To provide up to 2 inch deep floor depressions, use 2-1/2-inch thick lightweight concrete over 2 inch steel deck with local spray fireproofing to underside of deck. The slab-on-grade ground floor and basement will consist of six to ten-inch thick concrete over vapor barrier, over capillary break (gravel layer) on undisturbed existing material or engineered fill. The total (lateral and vertical system, and miscellaneous steel) is estimated to be in the range of 17 to 18 psf.

The foundation system would be that used for the WRB; namely, a combination of shallow reinforced concrete strip and isolated footings, and deep foundations (micropiles). The location of the buildings footprint to the crest of the hill requires the use of deep foundations.

For details of the structural system, see WRB OSHPD approved drawings and specifications.

New Building Option "D"

Option "D" consists of using the core and shell design prepared for the seven-story West Residence Building (WRB), currently designed for a skilled nursing facility. The building, however, would not be a licensed OSHPD facility but may require review

Appendix

Structural Narratives for Options B, C, D, and E

by OSHPD for adjacency issues with the OSHPD-licensed retaining walls and tee connector, the building joining the East Residence Building and the Link Building. The redesign would be in accordance to the City and County of San Francisco Building Code with an Importance Factor (I) of 1.25. With the redesign, the structural system would remain similar to that used for Option C except that the structural steel weights and foundation scope would be somewhat less. Specifically, the total (lateral and vertical system, and miscellaneous steel) is estimated to be in the range of 15 to 16 psf and the total length of micropile would reduce by about 10%.

New Building Option "E"

Option "E" consists of a new seven-story building at the site of the existing West Clarendon building, and would be designed and built to the requirements of the City and County of San Francisco Building Code with an Occupancy Category III (Importance Factor, I, of 1.25). It would not be under the OSHPD jurisdiction for permitting, but may require review by OSHPD for adjacency issues with the OSHPD-licensed retaining walls and tee connector, the building joining the East Residence Building and the Link Building.

The structural system described below addresses the issues of the site's high seismicity and topography, the 10-foot floor-to-floor height and the footprint configuration. Because of the proposed floor-to-floor height and the residential function, we recommend a structural system composed of flat plate concrete slabs with concrete shear wall cores that would also form the elevator shafts and stairwells. The wings of the proposed new building will likely require supplement lateral resisting elements at their ends, these would consist of shear walls located between apartments and along corridors. The building's footprint extends to the crest of the hillside. Along the north and west sides of the building site are retaining walls that are under OSHPD jurisdiction; the walls are believed to maintain fire truck access for the East Residence building. The premium for foundations to support the concrete structure should be considered during schematic design phase when determining which structural system to use.

The floor and flat roof systems consist of 10 to 12-inch thick post-tensioned concrete slabs. No fireproofing of the underside of the deck is necessary to obtain the required two-hour fire rating for the floor. The cast-in-place reinforced concrete shear walls forming the elevator shafts and stairwells would

be 14 to 18-inches thick, as would the wall elements located at selective locations along the wings of the building. Based on the geotechnical recommendations for the LHHRP, the building would be supported on an approximately three-foot thick mat slab within the core region of the building and deep foundations for the wings and portions of the building near the hillside crest. The deep foundations would consist of Micropiles or drilled and cast-in-place piers and a 10-inch thick suspended slab and grade beam system would be used at the wing ends. The mat footing will bear on Colma formations, dense to very dense Colma sands (8 to 10 ksf bearing capacity). A topping slab over the mat would be used.

During the schematic design phase other structural materials and systems, such as structural steel with concrete fill on steel deck, precast and tilt-up concrete with topping slab, light-gauge cold-formed framing with topping slab, ConnXtech, etc., should be considered. Factors such as site access, market place conditions, sole source, site-specific soil conditions, structure weight, architectural flexibility, etc. will need to be considered with each system.

Option A

A.2.1 Mechanical

a. Demolition

Existing hospital Wings K, L, and M are heated by steam radiators with manual control valves and ventilated thru operable windows. Steam distribution piping system consists of multiple low pressure steam supply and return risers (typically located on each of an exterior window) and main distribution pipes in the crawl spaces. Steam is fed from the Central Boiler room in Wing D. The steam lines are insulated with asbestos insulation except for some pipes that have been abated. The entire steam heating system will be demolished including the abatement of the asbestos pipe insulation.

The toilet exhaust system for the toilet stacks in each wing will be demolished in its entirety.

Existing floor slabs and walls will be cut and/or core drilled for duct and pipe penetrations.

b. Ventilation

The residential units will be naturally ventilated thru operable windows.

The Child Day Care, Adult Day Health Care, and the Assisted Living common/support spaces will be mechanically ventilated by ceiling mounted hydronic heating fan coil units and relief exhaust fans.

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

Each Child Day Care classroom will be provided with individual vertical fan coil unit located in a corner of a room and a wall mounted thermostats.

Corridors of each wing will be mechanically ventilated. Corridor ventilation system for each wing will consist of a roof top unit with heating hot water coils, a supply air duct riser, a supply air registers with fire smoke dampers at middle of the corridor, and one exhaust air duct riser at each end of the corridor and exhaust air registers with fire smoke dampers at each end of the corridor.

c. Heating

The heating system will be provided by a low temperature hydronic heating system. The system will consist of two (2) gas-fired high efficiency boilers located in the basement with the boiler flue ducted to the roof, two(2) circulating pumps with variable speed drive, hydronic baseboard heaters with remote wall mounted thermostats, ceiling mounted fan coil units, vertical fan coil units, pipe risers, and distribution mains in the crawl spaces. Toilet rooms will not be provided with a separate baseboard heater.

d. Toilet Exhaust

Toilet exhaust will be provided with individual ceiling mounted exhaust fans ducted to a common sheet metal exhaust riser with a 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Exhaust fans will be controlled by a light switch and humidistat. Scavenger fans will be on emergency power.

e. Kitchen Exhaust

Resident kitchen with two burner electric cooktop and microwave will be provided with a residential grade kitchen hood with built-in exhaust fan. Each kitchen hood will be ducted to a common sheet metal exhaust riser with a 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Scavenger fans will be on emergency power.

Child Day Care and Assisted Living main kitchen will be provided with a commercial type grease hood with a remote roof mounted exhaust fans, welded exhaust duct in a 2-hour rated enclosure, and an Ansul fire suppression system.

f. Laundry Exhaust

Clotheswashers for the Child Day Care will be ducted to the exterior wall. The commercial dryers for the Assisted Living will be provided with a lint collector and exhausted to the exterior.

g. Miscellaneous systems

- Elevator machine room cooling system will consist of a split ac unit with a remote outdoor condenser, unit will be located outside the elevator machine rooms and the supply and return ducted to wall registers inside the room. Supply and return ducts will be provided with fire smoke dampers at the wall penetrations.
- Gas meter room ventilation.
- Computer room air conditioning system will consist of a split ac unit with a remote outdoor condenser.
- Dishwasher exhaust hood ducted to a roof top exhaust fan.

h. Equipment

- Boilers: Bryan Model HE_RV 2000
- Hot water circulating pumps: Bell & Gossett
- Fan coil units: Trane Model C
- Bathroom exhaust fans: Panasonic Whisper Ceiling Fan Model PE FV11VQ3, 115 volts, single phase, 60 hz
- Bathroom Scavenger exhaust fans: Greenheck series 100, 110SWB with 1/4 HP motor, arrangement 10 and discharge backdraft damper.
- Kitchen Scavenger exhaust fans: same as bathroom scavenger exhaust fans.
- Elevator Machine Room AC unit: Daikin FTXS24DVJU indoor unit and RXS24DVJU outdoor unit, 208 volts, single phase, 60 hz.
-

A.2.2 Plumbing

a. Demolition

The entire existing plumbing for Wings K, L & M will be demolished in its entirety except for the storm drainage system. The existing plumbing system consist of sanitary waste/vent,

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

storm drainage, natural gas, domestic hot and cold water piping systems. The existing piping are old and at the end of their useful life. Water lines are galvanized steel pipes with threaded fittings. Sanitary waste and vent lines are cast-iron pipes with hub and spigot fittings for pipes 3 inch and larger, and galvanized steel pipes with threaded fittings for pipes 2 inch and smaller. Hot water lines are insulated with asbestos insulation.

b. General

The new plumbing system will consist of storm sewer, sanitary sewer and vent, domestic hot/cold water, fuel oil, and natural gas piping systems. Systems will be designed in accordance with the International Building Code 2006.

c. Sanitary Waste and Vent

Each fixture for the stacking kitchens and bathrooms in the Assisted Living units will be provided with its own individual set of waste and vent risers – 2 inch risers for lavatory stacks, 3 inch risers for kitchen stacks, 4 inch risers for waterclosets and 3 inch risers for showers. The sanitary sewer risers will be connected to horizontal sewer mains routed in the crawl spaces. The vents for each unit will be collected into one vent thru roof.

Each wing will be provided with two (2) 4 inch sewer mains.

A 1500 gallon pre-cast concrete grease interceptor will be provided for the main kitchen.

d. Storm Drainage

Existing storm drainage will remain as is.

e. Domestic Hot and Cold Water

Building domestic hot and cold water system will consist of a 6 inch water main connected to the site water main, water meters, reduced backflow preventers on the incoming main and make-up water to mechanical equipment, triplex booster pump system, water heaters, and distribution piping system. The main hot and cold water distribution lines will be in the first floor ceiling.

Domestic water maximum pressure will be limited to 65 PSI, and the minimum pressure will be at 40 psi.

Domestic hot water will be provided by two-(2) gas-fired water heaters, Laars model Pennant PNCV 2000 with one-(1) 500

gallons hot water storage tank and circulating pumps located in the garage mechanical room. Hot water lines will be insulated in accordance with Title 24.

Isolation valves will be provided for each bathroom, each stack or group of lavatories, waterclosets and plumbing fixtures. Isolation valves for the residential units will be at the first floor ceiling.

Make-up water with a backflow presenter will be provided for the boilers.

Irrigation water will be provided with a separate water meter for landscape.

Meters will be digital with remote reading capability.

f. Natural Gas:

Natural gas will be provided for the gas-fired boiler, water heaters, and for the kitchen equipment.

g. Fuel oil

Fuel oil system will consist of fuel fill port with a pump, double walled fuel lines, leak detection, and connection to the emergency generator sub-base fuel oil tank.

A.2.3 Fire Protection

Fire protection system will consist of a combination standpipe system, fire sprinkler system, fire pump system, with one (1) 1,000 GPM electric fire pump, jockey pump and controllers.

Combination standpipe system will consist of a standpipe in each staircase, 2½" fire hose valve at each floor landing, and fire department connections.

Entire building will be protected by a hydraulically calculated wet fire sprinkler system. Each floor for each building will be considered a separate sprinkler zone.

Option B

B.2.1 Mechanical

a. Ventilation

The residential units will be naturally ventilated thru operable windows.

The Child Day Care, Adult Day Health Care, and the Assisted Living common/support spaces will be mechanically ventilated by ceiling mounted hydronic heating fan coil units and relief exhaust fans.

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

Each Child Day Care classroom will be provided with individual vertical fan coil unit located in a corner of a room and a wall mounted thermostats.

Corridors of each wing will be mechanically ventilated. Corridor ventilation system for each wing will consist of a roof top unit with heating hot water coils, a supply air duct riser, a supply air registers with fire smoke dampers at middle of the corridor, one exhaust air duct riser at each end of the corridor and exhaust air registers with fire smoke dampers at each end of the corridor.

b. Heating

The heating system will be provided by a low temperature hydronic heating system. The system will consist of two (2) gas-fired high efficiency boilers located in the basement with the boiler flue ducted to the roof, two(2) circulating pumps with variable speed drive, hydronic baseboard heaters with remote wall mounted thermostats, ceiling mounted fan coil units, vertical fan coil units, pipe risers, and distribution mains in the crawl spaces. Toilet rooms will not be provided with a separate baseboard heater.

c. Toilet Exhaust

Toilet exhaust will be provided with individual ceiling mounted exhaust fans ducted to a common sheet metal exhaust riser with a 6 inch by 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Exhaust fans will be controlled by a light switch and humidistat. Scavenger fans will be on emergency power.

d. Kitchen Exhaust

Resident kitchen with two burner electric cooktop and microwave will be provided with a residential grade kitchen hood with built-in exhaust fan. Each kitchen hood will be ducted to a common sheet metal exhaust riser with an eight inch x 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Scavenger fans will be on emergency power.

Child Day Care and Assisted Living main kitchen will be provided with a commercial type grease hood with a remote roof mounted exhaust fans, welded exhaust duct in a 2-hour rated enclosure, and an Ansul fire suppression system.

e. Laundry Exhaust

Clotheswashers for the Child Day Care will be ducted to the exterior wall. The commercial dryers for the Assisted Living will be provided with a lint collector and exhausted to the exterior.

f. Miscellaneous systems

- Elevator machine room cooling system will consist of a split ac unit with a remote outdoor condenser, unit will be located outside the elevator machine rooms and the supply and return ducted to wall registers inside the room. Supply and return ducts will be provided with fire smoke dampers at the wall penetrations.
- Gas meter room ventilation.
- Computer room air conditioning system will consist of a split ac unit with a remote outdoor condenser.
- Dishwasher exhaust hood ducted to a roof top exhaust fan.

g. Equipment

- Boilers: Bryan Model HE_RV 2000
- Hot water circulating pumps: Bell & Gossett
- Fan coil units: Trane Model C
- Bathroom exhaust fans: Panasonic Whisper Ceiling Fan Model PE FV11VQ3, 115 volts, single phase, 60 hz
- Bathroom scavenger exhaust fans: Greenheck series 100, 110SWB with 1/4 HP motor, arrangement 10 and discharge backdraft damper.
- Kitchen scavenger exhaust fans: same as bathroom scavenger exhaust fans.
- Elevator Machine Room AC unit: Daikin FTXS24DVJU indoor unit and RXS24DVJU outdoor unit, 208 volts, single phase, 60 hz.

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

B.2.2 Plumbing

a. General

The plumbing system will consist of storm sewer, sanitary sewer and vent, domestic hot/cold water, fuel oil, and natural gas piping systems. Systems will be designed in accordance with the International Building Code 2006

b. Sanitary Waste and Vent

Sanitary sewer system will consist of sanitary waste and vent connections to plumbing fixtures, gravity drainage piping system, vents, grease interceptors, and connections to site sewer.

Each fixture for the stacking kitchens and bathrooms in the Assisted Living units will be provided with its own individual set of waste and vent risers – 2 inch risers for lavatory stacks, 2 inch risers for kitchen stacks, 4 inch risers for waterclosets and 2 inch risers for showers. The sanitary sewer risers will be connected to horizontal sewer mains below the first floor slab. The vents for each unit will be collected into one vent thru roof.

Each wing will be provided with two (2) 4 inch sewer mains. A master trap with a fresh air inlet will be provided at each connections to the site sewer.

A 1500 gallon pre-cast concrete grease interceptor will be provided for the main kitchen.

c. Storm Drainage

Storm drainage system will consist of roof drains, overflow drains, and area drains discharging into a gravity drainage piping system and connection to site sewer. A master trap with a fresh air inlet will be provided for each connection to the site sewer.

c. Domestic Hot and Cold Water

Building domestic hot and cold water system will consist of a 6 inch water main connected to the site water main, water meters, reduced backflow preventers on the incoming main and make-up water to mechanical equipment, triplex booster pump system, water heaters, and distribution piping system. The main hot and cold water distribution lines will be in the first floor ceilings.

Domestic water maximum pressure will be limited to 65 PSI, and the minimum pressure will be at 40 psi.

Domestic hot water will be provided by two-(2) gas-fired water heaters, Laars model Pennant PNCV 2000 with one-(1) 500 gallons hot water storage tank and circulating pumps located in the mechanical room. Hot water lines will be insulated in accordance with Title 24.

Isolation valves will be provided for each bathroom, each stack or group of lavatories, water closets and plumbing fixtures. Isolation valves for the residential units will be at the first floor ceilings.

Make-up water with a backflow preventer will be provided for the boilers.

Irrigation water will be provided with a separate water meter for landscape.

d. Natural gas

Natural gas will be provided for the gas-fired boilers, water heaters, and kitchen equipment.

B.2.3 Fire Protection

Fire protection system will consist of an 8 inch fire main, a combination standpipe system, fire sprinkler system, fire pump system, with one (1) 1,000 GPM electric fire pump, jockey pump and controllers.

Combination standpipe system will consist of a standpipe in each staircase, 2½" fire hose valve at each floor landing, and fire department connections.

Entire building will be protected by a hydraulically calculated wet fire sprinkler system. Each floor for each building will be considered a separate sprinkler zone.

Option C

C.2.1 Mechanical

a. General

The mechanical system for the West Residence Building consist of two rooftop air handling units, four (4) evaporative pre-cooling units, air-cooled chiller, four (4) exhaust fans, sound traps, variable volume boxes on the supply and return for each room, constant volume boxes, vapor kitchen exhaust hoods, thermostats and direct digital controls. (For costing, refer to Laguna Hospital West residence mechanical drawings).

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

The mechanical system is a 100 percent outside air system. The exhaust system provides ventilation exhaust, corridor exhaust and toilet exhaust, there is no dedicated toilet exhaust system.

b. Heating, Ventilation and Air conditioning

Entire building will be provided with air conditioning.

Each unit will be provided with a variable volume box for supply air and a variable volume exhaust box. Corridors will be provided with constant volume boxes for supply air and exhaust grilles connected to toilet constant volume exhaust boxes. Each room will be provided with a temperature control thermostat.

Core & support spaces will be provided with variable volume boxes for supply air and variable volume exhaust boxes.

c. Toilet Exhaust

Toilet exhausts will be provided thru ceiling exhaust grilles ducted to constant volume exhaust boxes. Constant volume boxes will be ducted to exhaust risers which are ducted to roof mounted exhaust mains and connected to the four (4) building exhaust fans on the roof. The corridors exhausts will be provided thru the same constant volume exhaust boxes.

d. Kitchen Exhaust

Resident kitchen with two burner electric cooktop and microwave will be provided with a residential grade kitchen hood with built-in exhaust fan. Each kitchen hood will be ducted to a common sheet metal exhaust riser with a 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Scavenger fans will be on emergency power.

Child Day Care and Assisted Living main kitchen will be provided with a commercial type grease hood with a remote roof mounted exhaust fans, welded exhaust duct in a 2-hour rated enclosure, and an Ansul fire suppression system.

e. Laundry Exhaust

Clotheswashers for the Child Day Care will be ducted to the exterior wall. The commercial dryers for the Assisted Living will be provided with a lint collector and exhausted to the exterior.

C.2.2 Plumbing

a. Sanitary Waste and Vent

Each fixture for the stacking kitchens and bathrooms in the

Assisted Living units will be provided with its own individual set of waste and vent risers – 2 inch risers for lavatory stacks, 3 inch risers for kitchen stacks, 4 inch risers for waterclosets, and 3 inch risers for showers. The sanitary sewer risers will be connected to underground sewer lines below Level V2 floor slab. The vents for each unit will be collected into one vent thru roof.

A 1500 gallon pre-cast concrete grease interceptor will be provided for the main kitchen.

b. Storm Drainage

Storm sewer piping system will consist of roof drains, overflow drains, and area drains discharging into a gravity drainage piping system, and connection to the site storm sewer main. Overflow drain system will be piped to the exterior independent of the storm drain.

c. Domestic Hot and Cold Water System:

Building domestic hot and cold water system will consist of a 6 inch cold water, 4 inch hot water supply and 2 inch hot water return connected to the Laguna Honda Hospital mains and distribution piping system. The main hot and cold water distribution lines will be in the first floor ceilings.

Domestic water maximum pressure will be limited to 65 PSI, and the minimum pressure will be at 40 psi.

Domestic hot water will be provided by two heat exchangers located in the East Residence. Hot water lines will be insulated in accordance with Title 24.

Isolation valves will be provided for each bathroom, each group of lavatories, water closets and plumbing fixtures. Isolation valves for the residential units will be at the first floor ceilings.

d. Natural Gas:

Natural gas will be provided for the kitchen. A separate gas service and meter will be required.

C.2.3 Fire Protection

Fire protection system will consist of a combination standpipe system, fire sprinkler system and a 6 inch fire line connection to the Laguna Honda Hospital Link Building Fire protection system which has a 1000 gpm fire pump system.

Appendix

Mechanical/ Plumbing, Fire Protection Options A-E

Combination standpipe system will consist of a standpipe in each staircase, 2½" fire hose valve at each floor landing, and fire department connections.

Entire building will be protected by a hydraulically calculated wet fire sprinkler system. Each floor for each building will be considered a separate sprinkler zone.

Option D

D.2.1 Mechanical

a. Ventilation

The resident bedroom units will be naturally ventilated thru operable windows.

The Child Day Care, Adult Day Health Care, and the Assisted Living common/support spaces will be mechanically ventilated by ceiling mounted hydronic heating fan coil units and relief exhaust fans.

Each Child Day Care classroom will be provided with individual vertical fan coil unit located in a corner of a room and a wall mounted thermostats.

Corridors of each wing will be mechanically ventilated. Corridor ventilation system for each wing will consist of a roof top unit with heating hot water coils, a supply air duct riser, a supply air registers with fire smoke dampers at middle of the corridor, one exhaust air duct riser at each end of the corridor and exhaust air registers with fire smoke dampers at each end of the corridor.

b. Heating

The heating system will be provided by a low temperature hydronic heating system. The system will consist 6 inch hot water supply and return lines connected to the Laguna Hospital central heating hot water system, two(2) circulating pumps with variable speed drive, hydronic baseboard heaters with remote wall mounted thermostats, ceiling mounted fan coil units, vertical fan coil units, pipe risers, and distribution mains. Toilet rooms will not be provided with a separate baseboard heater.

c. Toilet Exhaust

Toilet exhaust will be provided with individual ceiling mounted exhaust fans ducted to a common sheet metal exhaust riser with a 22 inch high sub-duct. Each exhaust duct riser will be

provided with a scavenger fan on the roof. Exhaust fans will be controlled by a light switch and humidistat. Scavenger fans will be on emergency power.

d. Kitchen Exhaust

Resident kitchen with two burner electric cooktop and microwave will be provided with a residential grade kitchen hood with built-in exhaust fan. Each kitchen hood will be ducted to a common sheet metal exhaust riser with a 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Scavenger fans will be on emergency power.

Child Day Care and Assisted Living main kitchen will be provided with a commercial type grease hood with a remote roof mounted exhaust fans, welded exhaust duct in a 2-hour rated enclosure, and an Ansul fire suppression system.

e. Laundry Exhaust

Clotheswashers for the Child Day Care will be ducted to the exterior wall. The commercial dryers for the Assisted Living will be provided with a lint collector and exhausted to the exterior.

f. Miscellaneous systems

- Elevator machine room cooling system will consist of a split ac unit with a remote outdoor condenser, unit will be located outside the elevator machine rooms and the supply and return ducted to wall registers inside the room. Supply and return ducts will be provided with fire smoke dampers at the wall penetrations.
- Gas meter room ventilation.
- Computer room air conditioning system will consist of a split ac unit with a remote outdoor condenser.
- Dishwasher exhaust hood ducted to a roof top exhaust fan.

g. Equipment

- Hot water circulating pumps: Bell & Gossett
- Fan coil units: Trane Model C
- Bathroom exhaust fans: Panasonic Whisper Ceiling Fan Model PE FVIIIVQ3, 115 volts, single phase, 60 hz

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

- Bathroom Scavenger exhaust fans: Greenheck series 100, 110SWB with 1/4 HP motor, arrangement 10 and discharge backdraft damper.
- Kitchen Scavenger exhaust fans: same as bathroom scavenger exhaust fans.
- Elevator Machine Room AC unit: Daikin FTXS24DVJU indoor unit and RXS24DVJU outdoor unit, 208 volts, single phase, 60 hz.

D.2.2 Plumbing

a. Sanitary Waste and Vent

Each fixture for the stacking kitchens and bathrooms in the Assisted Living units will be provided with its own individual set of waste and vent risers – 2 inch risers for lavatory stacks, 3 inch risers for kitchen stacks, 4 inch risers for waterclosets, and 3 inch risers for showers. The sanitary sewer risers will be connected to horizontal sewer mains located below the first floor slab. The vents for each unit will be collected into one vent thru roof.

A 1500 gallon pre-cast concrete grease interceptor will be provided for the main kitchen.

b. Storm Drainage

Storm sewer piping system will consist of roof drains, overflow drains, and area drains discharging into a gravity drainage piping system, and connection to the street storm sewer main on Addison Street. Overflow drain system will be piped to the exterior independent of the storm drain.

c. Domestic Hot and Cold Water System

Building domestic hot and cold water system will consist of a 6 inch cold water, 4 inch hot water and 2 inch hot water return mains connected to Laguna Honda Hospital water mains. The main hot and cold water distribution lines will be in the first floor ceilings.

Domestic water maximum pressure will be limited to 65 PSI, and the minimum pressure will be at 40 psi.

Isolation valves will be provided for each bathroom, each group

of lavatories, water closets and plumbing fixtures. Isolation valves for the residential units will be at the garage ceiling.

Natural Gas

Natural gas will be provided for the gas-fired kitchen equipment. A PG&E gas service line and meter will be provided.

D.2.3 Fire Protection

Fire protection system will consist of a combination standpipe system, fire sprinkler system, and 6 inch connection to the Laguna Hospital system.

Combination standpipe system will consist of a standpipe in each staircase, 2½" fire hose valve at each floor landing, and fire department connections.

Entire building will be protected by a hydraulically calculated wet fire sprinkler system. Each floor for each building will be considered a separate sprinkler zone.

Option E

E.2.1. Mechanical

a. Ventilation

The residential units will be naturally ventilated thru operable windows.

The Child Day Care, Adult Day Health Care, and the Assisted Living common/support spaces will be mechanically ventilated by ceiling mounted hydronic heating fan coil units and relief exhaust fans.

Each Child Day Care classroom will be provided with individual vertical fan coil unit located in a corner of a room and a wall mounted thermostats.

Corridors of each wing will be mechanically ventilated. Corridor ventilation system for each wing will consist of a roof top unit with heating hot water coils, a supply air duct riser, a supply air registers with fire smoke dampers at middle of the corridor, one exhaust air duct riser at each end of the corridor and exhaust air registers with fire smoke dampers at each end of the corridor.

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

b. Heating

The heating system will be provided by a low temperature hydronic heating system. The system will consist of two (2) gas-fired high efficiency boilers located in the basement with the boiler flue ducted to the roof, two(2) circulating pumps with variable speed drive, hydronic baseboard heaters with remote wall mounted thermostats, ceiling mounted fan coil units, vertical fan coil units, pipe risers, and distribution mains in the crawl spaces. Toilet rooms will not be provided with a separate baseboard heater.

c. Toilet Exhaust

Toilet exhaust will be provided with individual ceiling mounted exhaust fans ducted to a common sheet metal exhaust riser with a 6 inch by 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Exhaust fans will be controlled by a light switch and humidistat. Scavenger fans will be on emergency power.

d. Kitchen Exhaust

Resident kitchen with two burner electric cooktop and microwave will be provided with a residential grade kitchen hood with built-in exhaust fan. Each kitchen hood will be ducted to a common sheet metal exhaust riser with an eight inch x 22 inch high sub-duct. Each exhaust duct riser will be provided with a scavenger fan on the roof. Scavenger fans will be on emergency power.

Child Day Care and Assisted Living main kitchen will be provided with a commercial type grease hood with a remote roof mounted exhaust fans, welded exhaust duct in a 2-hour rated enclosure, and an Ansul fire suppression system.

e. Laundry Exhaust

Clotheswashers for the Child Day Care will be ducted to the exterior wall. The commercial dryers for the Assisted Living will be provided with a lint collector and exhausted to the exterior.

g. Miscellaneous systems

- Elevator machine room cooling system will consist of a split ac unit with a remote outdoor condenser, unit will be located outside the elevator machine rooms and the supply and return ducted to wall registers inside the room. Supply and return ducts will be provided with fire smoke dampers

at the wall penetrations.

- Gas meter room ventilation.
- Computer room air conditioning system will consist of a split ac unit with a remote outdoor condenser.
- Dishwasher exhaust hood ducted to a roof top exhaust fan.

h. Equipment

- Boilers: Bryan Model HE_RV 2000
- Hot water circulating pumps: Bell & Gossett
- Fan coil units: Trane Model C
- Bathroom exhaust fans: Panasonic Whisper Ceiling Fan Model PE FV11VQ3, 115 volts, single phase, 60 hz
- Bathroom Scavenger exhaust fans: Greenheck series 100, 110SWB with 1/4 HP motor, arrangement 10 and discharge backdraft damper.
- Kitchen Scavenger exhaust fans: same as bathroom scavenger exhaust fans.
- Elevator Machine Room AC unit: Daikin FTXS24DVJU indoor unit and RXS24DVJU outdoor unit, 208 volts, single phase, 60 hz.

E.2.2 Plumbing

a. Sanitary Waste and Vent

Sanitary sewer system will consist of sanitary waste and vent connections to plumbing fixtures, gravity drainage piping system, vents, grease interceptors, and connections to site sewer.

Each fixture for the stacking kitchens and bathrooms in the Assisted Living units will be provided with its own individual set of waste and vent risers - 2 inch risers for lavatory stacks, 2 inch risers for kitchen stacks, 4 inch risers for waterclosets and 2 inch risers for showers. The sanitary sewer risers will be connected to horizontal sewer mains below the first floor slab. The vents for each unit will be collected into one vent thru roof.

Appendix

Mechanical/ Plumbing. Fire Protection Options A-E

Each wing will be provided with two (2) 4 inch sewer mains. A master trap with a fresh air inlet will be provided at each connection to the site sewer.

A 1500 gallon pre-cast concrete grease interceptor will be provided for the main kitchen.

b. Storm Drainage

Storm drainage system will consist of roof drains, overflow drains, and area drains discharging into a gravity drainage piping system and connection to site sewer. A master trap with a fresh air inlet will be provided for each connection to the site sewer.

c. Domestic Hot and Cold Water

Building domestic hot and cold water system will consist of a 6 inch water main connected to the site water main, water meters, reduced backflow preventers on the incoming main and make-up water to mechanical equipment, triplex booster pump system, water heaters, and distribution piping system. The main hot and cold water distribution lines will be in the first floor ceilings.

Domestic water maximum pressure will be limited to 65 PSI, and the minimum pressure will be at 40 psi.

Domestic hot water will be provided by two-(2) gas-fired water heaters, Laars model Pennant PNCV 2000 with one-(1) 500 gallons hot water storage tank and circulating pumps located in the mechanical room. Hot water lines will be insulated in accordance with Title 24.

Isolation valves will be provided for each bathroom, each stack or group of lavatories, water closets and plumbing fixtures. Isolation valves for the residential units will be at the first floor ceilings.

Make-up water with a backflow preventer will be provided for the boilers.

Irrigation water will be provided with a separate water meter for landscape

d. Natural gas

Natural gas will be provided for the gas-fired boiler, water heaters, and kitchen equipment.

E.2.3 Fire Protection

Fire protection system will consist of an 8 inch fire main, a combination standpipe system, fire sprinkler system, fire pump system, with one (1) 1,000 GPM electric fire pump, jockey pump and controllers.

Combination standpipe system will consist of a standpipe in each staircase, 2½" fire hose valve at each floor landing, and fire department connections.

Entire building will be protected by a hydraulically calculated wet fire sprinkler system. Each floor for each building will be considered a separate sprinkler zone.

Appendix

Electrical System Narratives

Laguna Honda Assisted Living Electrical Systems Narrative

July 9, 2007

Option "A" – Remodel of Existing Wings K, L & M (144 Resident Units)

Electric Service and Distribution

1. Incoming service will be obtained from existing Main Switchboard "MS" located in the existing electrical building at North Loop Road directly across existing Ward "O". The existing main switchboard "MS" is rated at 1600A, 277/480V, 3 phase, 4 wire presently serving the existing hospital. This service will be available when the existing hospital electrical service is upgraded and connected to the new main service switchboard in the Link Building under the existing hospital remodel project OSHPD # HS020197.
2. Main distribution panelboards (277/480V) will be provided through out the facility for local power distribution.
3. Step-down transformers will be provided for 120/208V power distribution.
4. Separate 120/208V distribution panelboards and branch panelboards will be provided for all local 120/208V loads.
5. Large HVAC systems, motors, elevators and common lighting shall be served from 277/480V distribution system.
6. Receptacles, small motor ½ HP and below and miscellaneous 120 volt power needs shall be served from 120/208V distribution system.

Emergency Power System

1. Emergency power shall be obtained from the existing emergency generator and distribution system located in the existing electrical building at North Loop Road. The existing emergency distribution panel "EDP" is rated at 1600A, 277/480V, 3 phase, 4 wire and divided into three

separate branches (Equipment, Life Safety and Critical).

2. The following shall be connected to the Life Safety branch.
 - a) Illuminated exit signs.
 - b) Egress lighting.
 - c) Fire alarm system.
3. The following shall be connected to the critical branch.
 - a) Elevators.
 - b) Sump pumps (if applicable).
 - c) HVAC fan system if required.
 - d) Special equipment (as determined by Owner).
4. Separate emergency feed riser with emergency panelboards will be provided on dedicated floor for local distribution.

Telephone/ Data/ Cable TV Systems

1. Incoming telephone and data services shall be obtained from existing campus underground telephone distribution provided by Telephone Company.
2. Incoming cable TV service shall be obtained from existing campus underground cable TV distribution provided by Cable TV Company.
3. Main telephone and cable TV backboards shall be located in a separate tele-communication room located on the ground level.
4. The building telephone and cable TV system shall include raceways, wirings and outlets in each residential unit and in selected areas.

Access Control System

The integrated Access Control System shall include the following functional requirements and

characteristics:

1. Audio/ Video intercom and access control
2. Telephone entry system with "no phone" option up to 50 potential numbers

Appendix

Electrical System Narratives

3. System Operation
 - a) Visitors shall communicate with security desk clerk via audio/ video intercom system
 - b) Security personnel shall contact residents using telephone entry system control panel via programmed telephone numbers of the residents in the building
 - c) Upon approval of the contacted residents, the security personnel shall release the entry door via the intercom system
 - d) The entry door shall be unlocked for access into the building by the tenants with activation of proximity card readers with programmable key fob

Closed Circuit Television System

1. The closed circuit television (CCTV) systems shall include video cameras and operate in conjunction with the display monitors. The system shall be programmed to display camera information in a static or quad mode. A digital recorder will automatically assigned camera information.
2. Cameras shall be placed in corridors, community rooms and lobbies and display monitors and recorder shall be located at the reception/security and in the Manager's office.
3. Installation of the CCTV system shall be coordinated with the Door Monitoring and Alarm System.

Door Monitoring and Alarm System

1. This system shall be microprocessor based central control with individually wired remote door monitoring and alarm devices.
2. Any unauthorized exterior door opened shall sound an alarm at the door location and indicate an audio-visual indicator at the master annunciator panel in the Manager's office and at communication panel at the lobby reception/ security station.
3. This system shall interface with the Close Circuit Television System for activation of the cameras at the location of the exterior door alarms.

Fire Detection and Alarm System

1. The building fire detection and alarm system shall be microprocessor base, addressable supervised non-coded annunciated low voltage complete with fire alarm manual stations, ionization smoke detectors, horns and horn/strobes and annunciated circuits.
2. Each residential unit shall be provided with horn/strobes and smoke detectors that are tie-in to the building fire alarm system.
3. Horn/strobe and strobe units shall be provided inside bedrooms and bathrooms of each ADA/hearing impaired residential units.
4. All residential units shall have smoke detectors in the sleeping area and in the corridor leading to the sleeping area.

Wireless Elderly Emergency Call System

1. The system shall consist of wireless supervised transmitters which send signals to the central monitoring console via remote Receiver/Transmitter Units strategically located throughout the building.
2. The system shall operate as a stand alone alert system with the capability to integrate with on-site and off-site paging system.
3. The system shall have the capability to initiate alarms from fixed or mobile transmitters.
4. Transmitters shall be provided in bedrooms, bathrooms and selected common rooms.

Typical Residential Unit Electrical Requirements

1. Provide ceiling lights in each unit.
2. Provide wall receptacles per code.
3. Provide fire alarm horn/ strobe with tie-in to building fire alarm system.
4. Provide smoke detector in bedrooms and hallways.

Appendix

Electrical System Narratives

5. Provide the following for kitchen:
 - a) Power connection for electric cooktop, kitchen hood and light.
 - b) Receptacle for refrigerator.
 - c) Above counter GFI receptacles for small kitchen appliances per code.
6. Provide the following for bathroom:
 - a) Power for heater/ exhaust fan/ light combination unit. Heater/ light shall be on a wall timer.
Exhaust fan shall be on a separate wall switch with humidistat control.
 - b) Wall mounted light fixture over wash basin.
 - c) GFI receptacle and circuiting per code.
 - d) Elderly emergency pull station with pull cord.
7. Provide door chime with signal transformer and pullstation.
8. Provide one CATV outlet and one telephone/ data outlet in each bedroom and living area.
9. Provide strobes in each bedroom, bathroom and living area for hearing impaired residential units.
10. Provide elderly emergency pullstation with pull cord next to the bed.

Mechanical HVAC and Motor Connections

1. Coordinate with Division 15 for power and control connections to HVAC, fans and pumps.
2. Coordinate with Division 14 for power connection to elevator.

Miscellaneous Maintenance Receptacles and Outlets

1. Provide receptacles in corridors and lobby at 35 feet interval.

2. Provide GFI receptacles in garage on wall at 50 feet interval.
3. Provide GFI weatherproof receptacles on roof for roof top fans per code.
4. Provide receptacles for elevator pit, telecom room, electrical room and closets.
5. Provide GFCI weatherproof receptacles at outdoor locations.

Option "B" – New Construction On Site of Wings K, L, M (250 Resident Units)

Electrical Systems are same as Option "A"

Option "C" – West Residence Building, Relabeled For Assisted Living (234 Resident Units)

Electrical Service and Distribution

1. Incoming electrical service will be 1600A at 277/480V, 3 phase, 4 wire.
2. Main distribution panelboards (277/480V) will be provided through out the facility for local power distribution.
3. Step-down transformers will be provided for 120/208V power distribution.
4. Separate 120/208V distribution panelboards and branch panelboards will be provided for all local 120/208V loads.
5. Large HVAC systems, motors, elevators and common lighting shall be served from 277/480V distribution system.
6. Receptacles, small motor $\frac{1}{2}$ HP and below and miscellaneous 120 volt power needs shall be served from 120/208V distribution system.

Appendix

Electrical System Narratives

Emergency Power System

1. Emergency power system is separated into equipment, life safety and critical branches.
2. Equipment branch is 800A, 480/277V, 3 phase, 4 wire from east residence building equipment branch switchboard 3E1H.
3. Life safety branch is 150A, 480/277V, 3 phase, 4 wire from life safety switchboard 1L1H1 at Link Building.
4. Critical branch is 225A, 480/277V, 3 phase, 4 wire from critical branch switchboard 1CIH1 at Link Building.
5. The following shall be connected to the Life Safety branch.
 - a) Illuminated exit signs.
 - b) Egress lighting.
 - c) Fire alarm system.
6. The following shall be connected to the critical branch.
 - a) Elevators.
 - b) Sump pumps (if applicable).
 - c) HVAC fan system if required.
 - d) Special equipment (as determined by Owner).
5. Separate emergency feed riser with emergency panelboards will be provided on dedicated floor for local distribution.

Telephone/ Data/ Cable TV Systems

1. Incoming telephone and data services shall be obtained from existing campus underground telephone distribution provided by Telephone Company.
2. Incoming cable TV service shall be obtained from existing campus underground cable TV distribution provided by Cable TV Company.
3. Main telephone and cable TV backboards shall be located in a separate tele-communication room located on the ground level.
4. The building telephone and cable TV system shall include

raceways, wirings and outlets in each residential unit and in selected areas.

Access Control System

The integrated Access Control System shall include the following functional requirements and

characteristics:

1. Audio/ Video intercom and access control
2. Telephone entry system with “no phone” option up to 50 potential numbers
3. System Operation
 - a) Visitors shall communicate with security desk clerk via audio/ video intercom system
 - b) Security personnel shall contact residents using telephone entry system control panel via programmed telephone numbers of the residents in the building
 - i. Upon approval of the contacted residents, the security personnel shall release the entry door via the intercom system
 - ii. The entry door shall be unlocked for access into the building by the tenants with activation of proximity card readers with programmable key fob

Closed Circuit Television System

1. The closed circuit television (CCTV) systems shall include video cameras and operate in conjunction with the display monitors. The system shall be programmed to display camera information in a static or quad mode. A digital recorder will automatically assigned camera information.
2. Cameras shall be placed in corridors, community rooms and lobbies and display monitors and recorder shall be located at the reception/security and in the Manager's office.
3. Installation of the CCTV system shall be coordinated with the Door Monitoring and Alarm System.

Appendix

Electrical System Narratives

Door Monitoring and Alarm System

1. This system shall be microprocessor based central control with individually wired remote door monitoring and alarm devices.
2. Any unauthorized exterior door opened shall sound an alarm at the door location and indicate an audio-visual indicator at the master annunciator panel in the Manager's office and at communication panel at the lobby reception/security station.
3. This system shall interface with the Close Circuit Television System for activation of the cameras at the location of the exterior door alarms.

Fire Detection and Alarm System

1. The building fire detection and alarm system shall be microprocessor base, addressable supervised non-coded annunciated low voltage complete with fire alarm manual stations, ionization smoke detectors, horns and horn/strobes and annunciated circuits.
2. Each residential unit shall be provided with horn/strobes and smoke detectors that are tie-in to the building fire alarm system.
3. Horn/strobe and strobe units shall be provided inside bedrooms and bathrooms of each ADA hearing impaired residential units.
4. All residential units shall have smoke detectors in the sleeping area and in the corridor leading to the sleeping area.

Wireless Elderly Emergency Call System

1. The system shall consist of wireless supervised transmitters which send signals to the central monitoring console via remote Receiver Transmitter Units strategically located throughout the building.
2. The system shall operate as a stand alone alert system with the capability to integrate with on-site and off-site paging system.
3. The system shall have the capability to initiates alarms from fixed or mobile transmitters.

4. Transmitters shall be provided in bedrooms, bathrooms and selected common rooms.

Typical Residential Unit Electrical Requirements

1. Provide ceiling lights in each unit.
2. Provide wall receptacles per code.
3. Provide fire alarm horn/ strobe with tie-in to building fire alarm system.
4. Provide smoke detector in bedrooms and hallways.
5. Provide the following for kitchen:
 - a) Power connection for electric cooktop, kitchen hood and light.
 - b) Receptacle for refrigerator.
 - c) Above counter GFI receptacles for small kitchen appliances per code.
6. Provide the following for bathroom:
 - a) Power for heater/ exhaust fan/ light combination unit. Heater/ light shall be on a wall timer.
Exhaust fan shall be on a separate wall switch with humidistat control.
 - b) Wall mounted light fixture over wash basin.
 - c) GFI receptacle and circuiting per code.
 - d) Elderly emergency pull station with pull cord.
7. Provide door chime with signal transformer and pullstation.
8. Provide one CATV outlet and one telephone/ data outlet in each bedroom and living area.
9. Provide strobes in each bedroom, bathroom and living area for hearing impaired residential units.
10. Provide elderly emergency pullstation with pull cord next to the bed.

Appendix

Electrical System Narratives

Mechanical HVAC and Motor Connections

1. Coordinate with Division 15 for power and control connections to HVAC, fans and pumps.
2. Coordinate with Division 14 for power connection to elevator.

Miscellaneous Maintenance Receptacles and Outlets

1. Provide receptacles in corridors and lobby at 35 feet interval.
2. Provide GFI receptacles in garage on wall at 50 feet interval.
3. Provide GFI weatherproof receptacles on roof for roof top fans per code.
4. Provide receptacles for elevator pit, telecom room, electrical room and closets.
5. Provide GFCI weatherproof receptacles at outdoor locations.

Option "D" – West Residence Core and Shell Reconfigured with Group and Apartment Model Layouts (253 Resident Units)

Electrical systems are same as Option "C"

Option "E" – New Construction on Site of West Residence with Apartment and Group Middle Layouts (250 Resident Units)

Electric Service and Distribution

1. Incoming electric service shall be obtained from a new PG&E pad mounted transformer outside the Building.
2. Main switchboard shall be 3000A at 120/208V, 3 phase, 4 wire. Distribution panel boards (120/208V) will be provided throughout the facility for local power distribution.
3. Large HVAC systems, motors, elevators shall be connected to the main switchboard or power distribution panel.
4. Lighting and receptacle loads shall be connected to branch circuit panelboards.

5. Small motor $\frac{1}{2}$ HP and below shall be 120 volt, single phase and $\frac{3}{4}$ HP and above shall be 208 volt, 3 phase.

Emergency Power System

1. A 100 kW/125 kVA, 0.8 p.f., 120/208 volt, 3 phase standby circuit engine generator unit with integral tank and weatherproof sound enclosure will be installed to provide back-up power for the following equipment.
 - a) Illuminated exit signs.
 - b) Egress lighting.
 - c) Elevators.
 - d) Telephone system.
 - e) Fire alarm system.
 - f) Sump pumps (if applicable).
 - g) Special equipment (as determine by Owner).
 - h) HVAC life safety fan system (if applicable).
2. Two (2) automatic transfer switches will be provided with emergency distribution systems. (Emergency branch and standby branch).
3. Separate emergency feed riser with emergency panelboards will be provided on dedicated floor for local distribution.

Telephone/ Data/ Cable TV Systems

1. Incoming telephone and data services shall be underground and obtained from existing campus overhead telephone distribution provided by Telephone Company.
2. Incoming cable TV service shall be underground and obtained from existing campus overhead cable TV distribution provided by Cable TV Company.
3. Main telephone and cable TV backboards shall be located in a separate tele-communication room located on the ground level.
4. The building telephone and cable TV system shall include raceways, wirings and outlets in each residential unit and in selected areas.

Appendix

Electrical System Narratives

Access Control System

The integrated Access Control System shall include the following functional requirements and

Characteristics:

1. Audio/ Video intercom and access control
2. Telephone entry system with “no phone” option up to 50 potential numbers
3. System Operation
 - a) Visitors shall communicate with security desk clerk via audio/ video intercom system
 - b) Security personnel shall contact residents using telephone entry system control panel via programmed telephone numbers of the residents in the building
 - c) Upon approval of the contacted residents, the security personnel shall release the entry door via the intercom system
 - d) The entry door shall be unlocked for access into the building by the tenants with activation of proximity card readers with programmable key fob

Closed Circuit Television System

1. The closed circuit television (CCTV) systems shall include video cameras and operate in conjunction with the display monitors. The system shall be programmed to display camera information in a static or quad mode. A digital recorder will automatically assigned camera information.
2. Cameras shall be placed in corridors, community rooms and lobbies and display monitors and recorder shall be located at the reception/security and in the Manager’s office.
3. Installation of the CCTV system shall be coordinated with the Door Monitoring and Alarm System.

Door Monitoring and Alarm System

1. This system shall be microprocessor based central control with individually wired remote door monitoring and alarm devices.

2. Any unauthorized exterior door opened shall sound an alarm at the door location and indicate an audio-visual indicator at the master annunciator panel in the Manager's office and at communication panel at the lobby reception/security station.
3. This system shall interface with the Close Circuit Television System for activation of the cameras at the location of the exterior door alarms.

Fire Detection and Alarm System

1. The building fire detection and alarm system shall be microprocessor base, addressable supervised non-coded annunciated low voltage complete with fire alarm manual stations, ionization smoke detectors, horns and horn/strobes and annunciated circuits.
2. Each residential unit shall be provided with horn/strobes and smoke detectors that are tie-in to the building fire alarm system.
3. Horn/strobe and strobe units shall be provided inside bedrooms and bathrooms of each ADA/hearing impaired residential units.
4. All residential units shall have smoke detectors in the sleeping area and in the corridor leading to the sleeping area.

Wireless Elderly Emergency Call System

1. The system shall consist of wireless supervised transmitters which send signals to the central monitoring console via remote Receiver/Transmitter Units strategically located throughout the building.
2. The system shall operate as a stand alone alert system with the capability to integrate with on-site and off-site paging system.
3. The system shall have the capability to initiates alarms from fixed or mobile transmitters.
4. Transmitters shall be provided in bedrooms, bathrooms and selected common rooms.

Appendix

Electrical System Narratives

Typical Residential Unit Electrical Requirements

1. Provide ceiling lights in each unit.
2. Provide wall receptacles per code.
3. Provide fire alarm horn/ strobe with tie-in to building fire alarm system.
4. Provide smoke detector in bedrooms and hallways.
5. Provide the following for kitchen:
 - a) Power connection for electric cooktop, kitchen hood and light.
 - b) Receptacle for refrigerator.
 - c) Above counter GFI receptacles for small kitchen appliances per code.
6. Provide the following for bathroom:
 - a) Power for heater/ exhaust fan/ light combination unit. Heater/ light shall be on a wall timer.
Exhaust fan shall be on a separate wall switch with humidistat control.
 - b) Wall mounted light fixture over wash basin.
 - c) GFI receptacle and circuiting per code.
 - d) Elderly emergency pull station with pull cord.
7. Provide door chime with signal transformer and pullstation.
8. Provide one CATV outlet and one telephone data outlet in each bedroom and living area.
9. Provide strobes in each bedroom, bathroom and living area for hearing impaired residential units.
10. Provide elderly emergency pullstation with pull cord next to the bed.

Mechanical HVAC and Motor Connections

1. Coordinate with Division 15 for power and control connections to HVAC, fans and pumps.
2. Coordinate with Division 14 for power connection to elevator.

Miscellaneous Maintenance Receptacles and Outlets

1. Provide receptacles in corridors and lobby at 35 feet interval.
2. Provide GFI receptacles in garage on wall at 50 feet interval.
3. Provide GFI weatherproof receptacles on roof for roof top fans per code.
4. Provide receptacles for elevator pit, telecom room, electrical room and closets.
5. Provide GFCI weatherproof receptacles at outdoor locations.



